

## Example of amqsmon to display statistics for an IBM MQ Queue

<https://www.ibm.com/support/pages/node/6966706>

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IBM MQ Support

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### +++ Objective +++

You want to see an example of gathering the statistics for an IBM MQ Queue and to use the MQ utility "amqsmon" to display the statistics records.

### +++ Details +++

The Statistics Records are generated for the Physical Local Queue, for example, Q1.

If the messages are put into an Alias Queue (such as Q1ALIAS), then the statistics will be generated for the physical queue Q1 and amqsmon will show the records for Q1. A side-effect is that there will NOT be records for the Alias queue (Q1ALIAS).

### ++ Hints for testing

- You could setup the STATINT for the queue manager to a smaller value (default is 1800 seconds = 30 minutes)
- You could use the -b flag in amqsmon to only browse (but do NOT destroy) the messages

### ++ Baseline: Creation and configuration of queue manager

OS: Windows 11

```
C:\temp\mq> dspmqver -f2
```

```
Version: 9.3.2.0
```

Brand new queue manager: QMGR1

Open 3 terminal (command line) windows:

Window 1 for runmqsc

Window 2 for amqsmon

Window 3 for amqsput

+ Window 1: runmqsc

runmqsc QMGR1

```
# Show that the default is NOT to collect Queue Statistics STATQ(OFF)
# Notice that STATINT has a default value of 1800 seconds (30 minutes), which means
# that automatically, every 30 minutes the queue manager will generate
# new statistics records.
```

DISPLAY QMGR STATQ STATINT

AMQ8408I: Display Queue Manager details.

```
QMNAME(QMGR1)          STATINT(1800)
STATQ(OFF)
```

```
# Define Q1 and show default value for STATQ(QMGR)
```

define qlocal(Q1)

display qlocal(Q1) STATQ

AMQ8409I: Display Queue details.

```
QUEUE(Q1)              TYPE(QLOCAL)
STATQ(QMGR)
```

```
# Issue the following command to flush any pending accounting/statistics records from
memory and place messages into the appropriate queues:
```

RESET QMGR TYPE(STATISTICS)

AMQ8649I: Reset IBM MQ Queue Manager accepted.

```
# Show CURDEPTH of the queue with the statistics records
```

```
# So far, there are NO statistics records.
```

DISPLAY QLOCAL(SYSTEM.ADMIN.STATISTICS.QUEUE) CURDEPTH

AMQ8409I: Display Queue details.

```
QUEUE(SYSTEM.ADMIN.STATISTICS.QUEUE)  TYPE(QLOCAL)
CURDEPTH(0)
```

+ Window 2: amqsmon

Display and consume (destructive get) of statistic records

The following will show ALL the statistics records.

Because the flag "-b" (browse) is NOT used, then the records that are displayed are consumed and deleted:

```
C:\temp>amqsmon -m QMGR1 -t statistics
```

0 Records Processed.

The following will ONLY show the records for the queue Q1:

```
C:\temp\mq>amqsmon -m QMGR1 -t statistics -q Q1  
0 Records Processed.
```

Note: Use the option "-b" for "Browsing the statistics records". That is, do NOT use a destructive get.

This is useful while you experiment with amqsmon, in that way you will have statistics records in the SYSTEM queue.

**++ Test 1: base line (no collection of statistics records)**

Note: The statistics records are NOT being collected!! Thus, there will not be statistics records to display!

+ Window 3: amqspout

Put 3 messages into Q1 and exit sample

```
C:\temp>amqspout Q1 QMGR1
Sample AMQSPUT0 start
target queue is Q1
1
2
3
Sample AMQSPUT0 end
```

+ Window 1: runmqsc

```
# Reset/flush statistics
# Notice: This action is needed to accelerate this test scenario.
# If you do not do a manual reset/flush, then you will have to wait 30 minutes for new
statistics records
```

```
RESET QMGR TYPE(STATISTICS)
```

```
AMQ8649I: Reset IBM MQ Queue Manager accepted.
```

```
DISPLAY QLOCAL(SYSTEM.ADMIN.STATISTICS.QUEUE) CURDEPTH
```

```
AMQ8409I: Display Queue details.
```

```
  QUEUE(SYSTEM.ADMIN.STATISTICS.QUEUE)  TYPE(QLOCAL)
  CURDEPTH(0)
```

+ Window 2: amqsmon

Display and consume (destructive get) of statistic records

```
C:\temp>amqsmon -m QMGR1 -t statistics -q Q1
0 Records Processed.
```

## ++ Test 2: enabling STATQ(ON) for Q1

Because the gathering of statistics is enabled STATQ(ON) in queue Q1, then we are expecting records to be generated.

+ Window 1: runmqsc

```
# Enable statistics for queue  
ALTER QLOCAL(Q1) STATQ(ON)
```

+ Window 3: amqspout

Put 5 messages and exit.

```
C:\temp>amqspout Q1 QMGR1  
Sample AMQSPUT0 start  
target queue is Q1  
a  
b  
c  
d  
e  
Sample AMQSPUT0 end
```

+ Window 1: runmqsc

```
# Reset/flush statistics  
# Notice that there is 1 record
```

```
RESET QMGR TYPE(STATISTICS)  
AMQ8649I: Reset IBM MQ Queue Manager accepted.
```

```
DISPLAY QLOCAL(SYSTEM.ADMIN.STATISTICS.QUEUE) CURDEPTH  
AMQ8409I: Display Queue details.  
  QUEUE(SYSTEM.ADMIN.STATISTICS.QUEUE)  TYPE(QLOCAL)  
  CURDEPTH(1)
```

+ Window 2: amqsmon

```
C:\temp> amqsmon -m QMGR1 -t statistics -q Q1
```

```
MonitoringType: QueueStatistics  
QueueManager: 'QMGR1'
```

IntervalStartDate: '2023-03-27'  
IntervalStartTime: '10.22.02'  
IntervalEndDate: '2023-03-27'  
IntervalEndTime: '10.23.45'  
CommandLevel: 932  
ObjectCount: 1  
QueueStatistics: 0  
  QueueName: 'Q1'  
  CreateDate: '2023-03-27'  
  CreateTime: '10.04.37'  
  QueueType: Local  
  QueueDefinitionType: Predefined  
  QMinDepth: 3  
  QMaxDepth: 8  
  AverageQueueTime: [0, 0]  
  PutCount: [5, 0]  
  PutFailCount: 0  
  Put1Count: [0, 0]  
  Put1FailCount: 0  
  PutBytes: [5, 0]  
  GetCount: [0, 0]  
  GetBytes: [0, 0]  
  GetFailCount: 0  
  BrowseCount: [0, 0]  
  BrowseBytes: [0, 0]  
  BrowseFailCount: 0  
  NonQueuedMsgCount: 0  
  ExpiredMsgCount: 0  
  PurgeCount: 0

1 Records Processed.

+ Window 1: runmqsc

# Show that the statistic record was consumed by amqsmn and there are no more such records

`DISPLAY QLOCAL(SYSTEM.ADMIN.STATISTICS.QUEUE) CURDEPTH`

AMQ8409I: Display Queue details.

`QUEUE(SYSTEM.ADMIN.STATISTICS.QUEUE)  TYPE(QLOCAL)`  
  `CURDEPTH(0)`

### ++ Test 3: turn off the statistics for queues

To turn off the generation of statistics for queues, it is necessary to set STATQ for the queue manager to: NONE

For more information please refer online manual:

<https://www.ibm.com/docs/en/ibm-mq/9.3?topic=properties-queue-manager>

IBM MQ 9.3

Queue manager properties

.

Please see the section:

Statistics monitoring (Multiplatforms)

Then see the 2nd row in the table:

Queue Statistics

.

" ... to switch off statistics data collection for all the queue manager's queues regardless of the setting of the queue's Queue statistics property, click **None**. "

+ Window 1: runmqsc

```
# Alter STATQ to NONE
```

```
ALTER QMGR STATQ(NONE)
```

```
AMQ8008I: IBM MQ queue changed.
```

```
DISPLAY QMGR STATQ
```

```
AMQ8408I: Display Queue Manager details.
```

```
QMNAME(QMGR1) STATQ(NONE)
```

+ Window 3: amqsput

Put 3 more messages:

```
C:\> amqsput Q1 QMGR1
```

```
Sample AMQSPUT0 start
```

```
target queue is Q1
```

```
1
```

```
2
```

```
3
```

```
Sample AMQSPUT0 end
```

+ Window 1: runmqsc

# Reset/flush messages

# Notice that there are NO records

RESET QMGR TYPE(STATISTICS)

AMQ8649I: Reset IBM MQ Queue Manager accepted.

DISPLAY QLOCAL(SYSTEM.ADMIN.STATISTICS.QUEUE) CURDEPTH

AMQ8409I: Display Queue details.

QUEUE(SYSTEM.ADMIN.STATISTICS.QUEUE) TYPE(QLOCAL)  
CURDEPTH(0)

+ Window 2: amqsmon

C:\> amqsmon -m QMGR1 -t statistics -q Q1

0 Records Processed.

+++ end +++