

# ***MQRC2***

## ***Operation and Installation Manual***



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# Table of Contents

<b>1 INTRODUCTION.....</b>	<b>1</b>
1.1 OVERVIEW.....	1
<b>2 INSTALLING MQRC2.....</b>	<b>2</b>
2.1 WINDOWS INSTALLATION.....	2
2.2 UNIX AND LINUX INSTALLATION.....	2
2.3 IBM i INSTALLATION.....	3
2.4 z/OS INSTALLATION.....	4
<b>3 STARTING MQRC2.....</b>	<b>6</b>
3.1 PARAMETERS.....	6
3.2 WINDOWS COMMAND PROMPT EXECUTION.....	6
3.3 UNIX SHELL EXECUTION.....	6
3.4 IBM i EXECUTION.....	6
3.5 z/OS EXECUTION.....	6
<b>4 SAMPLE OUTPUT.....</b>	<b>8</b>
4.1 WINDOWS.....	8
4.2 UNIX AND LINUX.....	9
<b>5 APPENDIX A – TECHNICAL SUPPORT.....</b>	<b>10</b>
<b>6 APPENDIX D – SUMMARY OF CHANGES.....</b>	<b>11</b>
<b>7 APPENDIX E – LICENSE AGREEMENT.....</b>	<b>12</b>
<b>8 APPENDIX F – NOTICES.....</b>	<b>16</b>



# 1 Introduction

## 1.1 Overview

*MQRC2* application can interpret an MQ reason code number (i.e. 2035), MQ reason code symbol (i.e. MQRC\_OBJECT\_IN\_USE) or AMQ message number (i.e. AMQ4005) and display the relevant information from the *WebSphere MQ Messages* manual.

## 2 Installing MQRC2

This section describes how to install Capitalware's MQRC2.

### 2.1 Windows Installation

To install MQRC2 on Windows, do the following instructions:

- Run the install program called: **mqrc2-setup.exe**
- The installer follows the standard Windows install procedures and provides default values for the user.
- When the install program has completed execution, there will be a newly created folder under *Start -> All Programs* called **MQRC2**.
- To run MQRC2, select the MQRC2 icon from within the MQRC2 folder.

Note: The user may copy or ftp the mqrc2.exe file from one Windows PC/server to another Windows PC/server.

### 2.2 Unix and Linux Installation

To install MQRC2 on Unix or Linux, first unzip the **mqrc2.zip** and then select the appropriate TAR file for the target platform. You will find 8 TAR files in the original ZIP file:

- **AIX/mqrc2\_aix.tar**
- **HPUX\_IA64 /mqrc2\_hpux\_ia64.tar**
- **HPUX\_PA-RISC /mqrc2\_hpux.tar**
- **Linux\_x86/mqrc2\_linux\_x86.tar**
- **Linux\_POWER/mqrc2\_linux\_power.tar**
- **Linux\_zSeries//mqrc2\_linux\_zseries.tar**
- **Solaris\_SPARC/mqrc2\_solaris.tar**
- **Solaris\_x86/mqrc2\_solaris\_x86.tar**

Steps to install the server-side security exit:

1. ftp or copy the selected TAR file to the target platform to the **/opt/capitalware/** directory.
2. Un-tar the mqrc2\_xxx.tar file into the **/opt/capitalware/** sub-directory (xxx is either aix, hpux, solaris or linux)

```
cd /opt/capitalware/  
tar -xvf mqrc2_xxx.tar
```

## 2.3 IBM i Installation

To install the MQRC2 on IBM i, first unzip the **mqrc2.zip** and then select the files in the IBM i (iSeries) directory.

- **mqrc2.savf** is the IBM i 'Save File' that contains MQRC2

Steps to install MQRC2:

1. Log onto the target IBM i server and do the following command:

```
CRTSAVF FILE(QGPL/MQRC2)
```

2. ftp the IBM i files to the IBM i server as follows:

```
ftp -s:mqrc2_iseries.ftp iseries_hostname
```

```
your-IBM i-userid  
your-IBM i-password  
  
binary  
cd QGPL  
put mqrc2.savf  
  
quit
```

3. Log onto the target IBM i server and do the following commands:

```
RSTLIB SAVLIB(MQRC2) DEV(*SAVF) SAVF(QGPL/MQRC2)  
CLRSVF FILE(QGPL/MQRC2)  
CHGOBJOWN OBJ(MQRC2) OBJTYPE(*LIB) NEWOWN(QMQM)
```

## 2.4 z/OS Installation

To install the MQRC2 for z/OS, first unzip the **mqrc2.zip**. The zip file contains 1 z/OS XMIT prepared dataset.

- **MQRC2.LOAD.ZOS** is the XMIT dataset that contains the z/OS load-module.

Steps to install MQRC2:

1. ftp the z/OS XMIT prepared datasets to the z/OS LPAR.

**ftp -s:mqrc2.ftp z/OS\_hostname**

```
your-z/OS-userid
your-z/OS-password

binary
quote SITE recfm=fb lrecl=80 blksize=3120
put MQRC2.LOAD.ZOS
quit
```

If the user receives the following error message then they will need to pre-allocate the z/OS dataset:

```
ftp> put MQRC2.LOAD.ZOS
200 Port request OK.
550-SVC99 RETURN CODE=4 S99INFO=0 S99ERROR=38656 HEX=9700 S99ERSN code X'000003F3'.
550 Unable to create data set xxxxx.MQRC2.LOAD.ZOS for STOR command.
```

To pre-allocate the XMIT dataset go to option 3.2 of ISPF and allocate the dataset: MQRC2.LOAD.ZOS.

Use the following dataset attributes when allocating the dataset:

Space	
Units	BLOCKS
Primary Quantity	40
Secondary Quantity	40
Directory Blocks	0
DCB Parameters	
RECFM	FB
LRECL	80
BLKSIZE	3120
DsnType	Blank

After the user has pre-allocated the dataset, they can redo the ftp commands.



2. Log on to z/OS LPAR and issue the following TSO RECEIVE commands:

**TSO RECEIVE INDATASET(MQRC2.LOAD.ZOS)**

After issuing the above commands, the following product dataset will appear:

- **+HLQ+.CPTLWARE.MQRC2.LOAD** is the dataset that contains the z/OS load-module.

## 3 Starting MQRC2

This section describes the various ways that the MQRC2 can be started.

### 3.1 Parameters

This section describes the required and optional command-line parameters for the MQRC2.

```
mqrc2 #####
mqrc2 0x#####
mqrc2 symbol
mqrc2 [-s] symbol
mqrc2 AMQ####
mqrc2 [-a] AMQ####
```

Required Parameter	Description
#####	MQ Reason code number i.e. 2035
0x#####	MQ Reason code number in hexadecimal i.e. 0x7F3
symbol	MQ Reason code symbol i.e. MQRC_UNKNOWN_OBJECT_NAME
AMQ####	MQ AMQ number i.e. AMQ4001

### 3.2 Windows Command Prompt Execution

To run MQRC2, open a Command Prompt, change to the MQRC2 directory (i.e. C:\Capitalware\MQRC2 ) and then type **mqrc2.exe** {parameters} and then press **Enter**.

```
mqrc2 2033
```

### 3.3 Unix Shell Execution

To run MQRC2, open a Shell Prompt, change to the MQRC2 directory (i.e. /opt/Capitalware/MQRC2 ) and then type **mqrc2** {parameters} and then press **Enter**.

```
mqrc2 2033
```

### 3.4 IBM i Execution

To run MQRC2 on IBM i, on the command line then type the following

```
CALL MQRC2/MQRC2 PARM('2033')
```

### 3.5 z/OS Execution

To run MQRC2 on z/OS, on the command line then type the following

```
TSO CALL '+HLQ+.CPTLWARE.MQRC2.LOAD(MQRC2)' '2033'
```

The user can create a simple CLIST member in their CLIST dataset that is allocated to SYSPROC or SYSEXEC to get easy access to MQRC2 load-module.  
i.e.

```
PROC 1 XX  
CONTROL MSG FLUSH  
CALL '+HLQ+.CPTLWARE.MQRC2.LOAD(MQRC2)' '&XX'  
EXIT
```

Now the user can simply type:

**TSO MQRC2 2033**

## 4 Sample Output

### 4.1 Windows

```
C:\Capitalware\MQRC2>mqrc2 2035
```

```
2035 (X'07F3') MQRC_NOT_AUTHORIZED
```

**Explanation:**

The user is not authorized to perform the operation attempted:

- On an MQCONN or MQCONNX call, the user is not authorized to connect to the queue manager.

- \* On z/OS, for CICS applications, MQRC\_CONNECTION\_NOT\_AUTHORIZED is issued instead.

- On an MQOPEN or MQPUT1 call, the user is not authorized to open the object for the option(s) specified.

- \* On z/OS, if the object being opened is a model queue, this reason also arises if the user is not authorized to create a dynamic queue with the required name.

- On an MQCLOSE call, the user is not authorized to delete the object, which is a permanent dynamic queue, and the Hobj parameter specified on the MQCLOSE call is not the handle returned by the MQOPEN call that created the queue.

- On a command, the user is not authorized to issue the command, or to access the object it specifies. This reason code can also occur in the Feedback field in the message descriptor of a report message; in this case it indicates that the error was encountered by a message channel agent when it attempted to put the message on a remote queue.

**Completion Code:**

MQCC\_FAILED

**Programmer Response:**

Ensure that the correct queue manager or object was specified, and that appropriate authority exists.

## 4.2 Unix and Linux

```
$ mqrc2 2085
```

```
2085 (X'0825') MQRC_UNKNOWN_OBJECT_NAME
```

### Explanation:

An MQOPEN or MQPUT1 call was issued, but the object identified by the ObjectName and ObjectQMGrName fields in the object descriptor MQOD cannot be found. One of the following applies:

- The ObjectQMGrName field is one of the following:

- \* Blank

- \* The name of the local queue manager

- \* The name of a local definition of a remote queue (a queue-manager alias) in which the RemoteQMGrName attribute is the name of the local queue manager but no object with the specified ObjectName and ObjectType exists on the local queue manager.

- The object being opened is a cluster queue that is hosted on a remote queue manager, but the local queue manager does not have a defined route to the remote queue manager.

- The object being opened is a queue definition that has QSGDISP(GROUP).

Such definitions cannot be used with the MQOPEN and MQPUT1 calls. This can also occur in response to a command that specifies the name of an object or other item that does not exist.

### Completion Code:

MQCC\_FAILED

### Programmer Response:

Specify a valid object name. Ensure that the name is padded to the right with blanks if necessary. If this is correct, check the object definitions.

## **5 Appendix A – Technical Support**

The support for MQRC2 can be found at the following location (requires a support contract):

**Online Help Desk Ticketing System at**  
[www.capitalware.biz/phpst/](http://www.capitalware.biz/phpst/)

**By email at:**  
[support@capitalware.biz](mailto:support@capitalware.biz)

**By regular mail at:**

Capitalware Inc.  
Attn: MQRC2 Support  
1673 Richmond Street, Suite 524  
London, Ontario N6G2N3  
Canada

## 6 Appendix D – Summary of Changes

- MQRC2 v1.1.1
  - Fixed an issue with reason codes 2424 to 2539 and 6100 to 6129
- MQRC2 v1.1.0
  - Ported the code to IBM i and z/OS
  - Created binaries/executables for all major platforms
- MQRC2 v1.0.0
  - Initial release.

## 7 Appendix E – License Agreement

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