

Unit 3. Using MQSC commands to administer WebSphere MQ

What this unit is about

This unit covers the WebSphere MQ script commands syntax and the runmqsc utility used to apply commands to the queue manager

What you should be able to do

After completing this unit, you should be able to:

- Use the runmqsc utility to create WebSphere MQ objects
- Explain the syntax of MQSC commands

How you will check your progress

Accountability:

- Checkpoint
- Machine exercises

MQSC command overview

- RUNMQSC is a control command
- Used to run script commands
- Used to manage: (create/delete/modify/display)
 - Queues
 - Channels
 - Processes
 - Listeners
 - Topics, subscriptions, and so forth
- Line-based interface

© Copyright IBM Corporation 2008

Figure 3-2. MQSC command overview

WM203 / VM2032.0

Notes:

Runmqsc is a control command, that is, it is invoked from a DOS or Shell prompt. The queue manager must be running in order to issue the runmqsc command. However, the queue manager does not need to be local. This topic is discussed further in the next slide.

Runmqsc subcommands are known as **script commands** as they are frequently batched together to create a repeatable set WebSphere MQ resource definitions.

Runmqsc is used to create, modify, delete, and display WebSphere MQ objects. Some of these object types are listed here. Runmqsc is also used to display the runtime status of objects like channels.

RUNMQSC invocation syntax

```
>>> runmqsc -e -v -w -x <QMgrName> -WaitTime
```

- 3 Operation modes:
 - Verify mode (**-v**)
 - Direct
 - Indirect

© Copyright IBM Corporation 2008

Figure 3-3. RUNMQSC invocation syntax

WM203 / VM2032.0

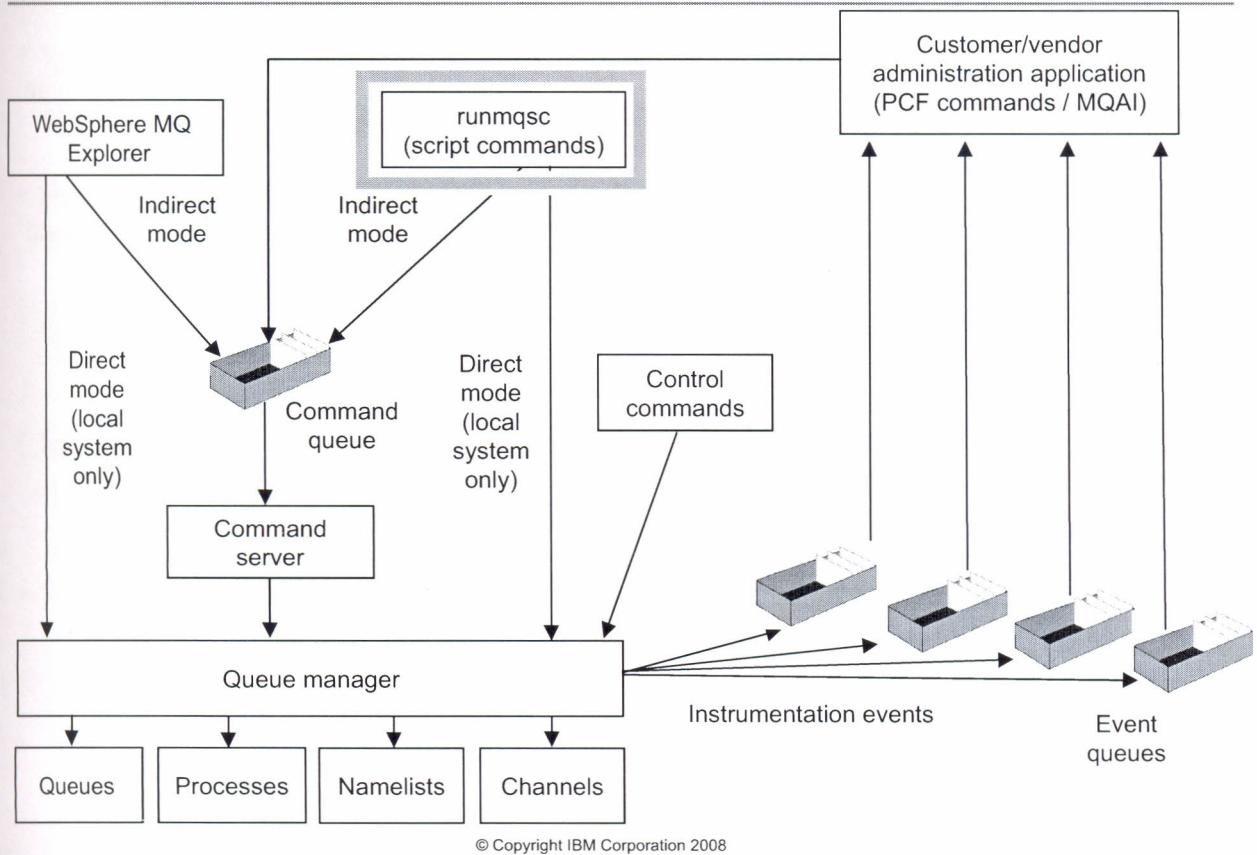
Notes:

All parameters are optional in the RUNMQSC command. With no parameters, runmqsc attempts to connect the local default queue manager.

The three modes of operation:

- Verify - Input commands are read and checked but not performed.
 - Direct - Connection to a local queue manager
 - Indirect - Connection to a remote queue manager

Administration interfaces



© Copyright IBM Corporation 2008

Figure 3-4. Administration interfaces

WM203 / VM2032.0

Notes:

The administration interfaces include:

- WebSphere MQ Explorer
- WebSphere MQ commands (MQSC)
- Programmable command format (PCF) commands
- WebSphere MQ Administration Interface (MQAI)
- WebSphere control commands
- Administration application on WebSphere MQ for HP NonStop Server
- Event messages put on an event queue by the queue manager and retrieved by an application

WebSphere MQ command modes

- Control commands
 - Lowercase when referenced in course
 - Entered at a command prompt
 - Same in UNIX and Windows
 - Described in system administration guide
- MQSC commands
 - Uppercase when referenced in course
 - Entered using `runmqsc` control command
 - The same in all MQ implementations
 - Described in script (MQSC) command reference

```

c: dspmq
c: mqrc
c: crtmqm QM1
c: strmqm QM1
c: runmqsc QM1

c: amqspput Q1 QM1
c: amqsgbr Q1 QM1
c: amqsbcg Q1 QM1
c: amqsget Q1 QM1

c: endmqm -w QM1
c: dltmqm QM1
  
```

sample
programs

```

DIS QMGR
DEF QL(Q1)
DIS Q(Q1)
ALT QL(Q1) MAXDEPTH(1000)
DEF QL(Q2)
CLEAR QL(Q1)
DEL QL(Q1)
.
.
END
  
```

© Copyright IBM Corporation 2008

Figure 3-5. WebSphere MQ command modes

WM203 / VM2032.0

Notes:

Script command rules

- In most cases script command format is:
verb object-type object-name parameter₁ .. parameter_n
- Parameters are either keyword or keyword with value
 - For example: TRIGGER TRIGTYPE(FIRST)
- Keywords are not case sensitive but string values are
- Parameter order is not significant although some exceptions do exist
- Some verbs can be abbreviated
 - For example: DEFINE as DEF
- Repeat parameters not allowed

© Copyright IBM Corporation 2008

Figure 3-6. Script command rules

WM203 / VM2032.0

Notes:

The figure lists some of the rules regarding specification of script commands. The command verb must always come first. Following the command verb, in most cases, is an WebSphere MQ object, and then optional keyword and keyword/value parameters.

Script commands are not case-sensitive, however, names and parameter values are case-sensitive.

After specification of the verb and object, parameter order is not important, and some verbs can be abbreviated. Abbreviations are fixed and are described in the WebSphere MQ V7 Information Center under their relevant MQSC command entries as synonyms, for example, for REFRESH CLUSTER, the synonym is REF CLUSTER.

d in course
ntrol

entations
command

(1000)

M203 / VM2032.0

VI Corp. 2008

© Copyright IBM Corp. 2008

Unit 3. Using MQSC commands to administer WebSphere MQ

3-7

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.



Note

One exception regarding parameter order is that the parameter CHLTYPE must be the first parameter specified in DEFINE CHANNEL and ALTER CHANNEL commands except on z/OS.

Parameters are not allowed to be repeated within the same script command, for example, ALTER QLOCAL (ANDREW) TRIGGER TRIGGER is not valid. No is repeating the negation of the same parameter, as in, ALTER QLOCAL (ANDREW) TRIGGER NOTRIGGER.

Object naming rules

- The character set that can be used for naming all WebSphere MQ objects is as follows:
 - Uppercase A–Z
 - Lowercase a–z
 - Numeric 0–9
 - Period (.)
 - Forward slash (/)
 - Underscore (_)
 - Percent sign (%).

© Copyright IBM Corporation 2008

Figure 3-7. Object naming rules

WM203 / VM2032.0

Notes:

Here are the rules for naming WebSphere MQ objects.

WebSphere MQ authentication information, channel, client channel, listener, namelist, process, queue, service, storage class, and topic objects exist in separate object name spaces, and so objects from each type can all have the same name. However, an object cannot have the same name as any other object in the same namespace. (For example, a local queue cannot have the same name as a model queue.) Names in WebSphere MQ are case-sensitive; however, lowercase characters that are not contained within quotation marks are folded to uppercase.

Leading or embedded blanks are not allowed.

Avoid using names with leading or trailing underscores, because they cannot be handled by some systems. (z/OS)

Any name that is less than the full field length can be padded to the right with blanks.

Any structure to the names (for example, the use of the period or underscore) is not significant to the queue manager.

Object type naming restrictions

- Queue names can be up to 48 characters long.
- Queue names beginning with **SYSTEM** are reserved
 - Attributes can be modified to suit local requirements
- Names up to 48 characters in length:
 - Processes
 - Namelists
 - Clusters
 - Topics
 - Authentication information
- Names up to 20 characters in length:
 - Channels
- Object names beginning with **SYSTEM** are reserved
 - Attributes can be modified to suit local requirements

© Copyright IBM Corporation 2008

Figure 3-8. Object type naming restrictions

WM203 / VM2032.0

Notes:

The rule for the reserved queue names is:

- Names that start with “SYSTEM.” are reserved for queues defined by the queue manager. You can use the ALTER or DEFINE REPLACE commands to change these queue definitions to suit your installation.

The rule for other object names is:

- Processes, namelists, clusters, topics, and authentication information objects can have names up to 48 characters long. Channels can have names up to 20 characters long.

Checkpoint questions

1. What does the `-v` runmqsc command parameter do?
 - a. Show the runmqsc version
 - b. Switch to verbose mode
 - c. Run script commands in verify mode
 - d. Cause a trace of runmqsc
2. Which is not an administrative interface?
 - a. MQAI
 - b. PCF
 - c. MQI
 - d. MQSC
3. Is the following script command valid?

```
Alter ql(ANDREW) TRIGGER TRIGTYPE(DEPTH) DEPTH(10)
```

© Copyright IBM Corporation 2008

Figure 3-9. Checkpoint questions

WM203 / VM2032.0

Notes:

eue
ige these

s can have
ers long.