



IBM Software Group

WebSphere® MQ V7.0

z/OS® enhancements



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This module presents the enhancements to z/OS in WebSphere MQ V7.

Agenda

- RACF® classes
- MQ Explorer administration
- ISPF panel changes
- Restrictions



New RACF classes, MQ Explorer administration of z/OS, and changes to ISPF are discussed.

Section

RACF classes



.There are changes to RACF to support mixed case profiles.

New RACF classes

New mixed case classes

- MXADMIN
- MXQUEUE
- MXPROC
- MXNLIST
- MXTOPIC

Existing upper case classes

- MQADMIN
- MQQUEUE
- MQPROC
- MQNLIST



Protecting mixed case resources before WebSphere MQ V7 required the use of generic profiles. In WebSphere MQ V7 you can protect these resources by defining mixed case profiles in the appropriate mixed case RACF classes.

The new mixed case RACF classes and the corresponding upper case classes are shown here. MXTOPIC is new to support topic objects. There is no uppercase only class for topic objects, that is no MQTOPIC class. MXTOPIC is used whether mixed or upper case is selected.

Queue manager parameter

- ALTER/DISPLAY QMGR SCYCASE
 - ▶ UPPER (default)
 - ▶ MIXED
- REFRESH SECURITY(*) TYPE(CLASSES)
command enhanced for new classes



There is a new queue manager parameter, SCYCASE which determines whether upper case only or mixed case profiles are used. The queue manager's initial default setting is UPPER. The REFRESH SECURITY command can be used to change to MIXED. Alternatively, you can recycle the queue manager.

The REFRESH SECURITY command is enhanced to allow these new classes to be specified.

Uppercase only profiles

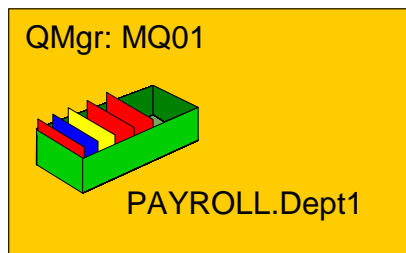
- ▶ Switch profiles
- ▶ All high-level qualifiers (HLQ) including subsystem and Queue-Sharing Group identifiers
- ▶ Profiles for SYSTEM objects
- ▶ Profiles for default objects
- ▶ The MQCMDS class; all command profiles are uppercase only
- ▶ The MQCONN class; all connection profiles are uppercase only
- ▶ RESLEVEL profiles
- ▶ The 'object' qualification in command resource profiles; for example
 - hlq.QUEUE.queueName
 - resource name only is mixed case
- ▶ Dynamic queue profiles hlq.CSQOREXX.* , hlq.CSQUTIL.* , and CSQXCMD.*
- ▶ The 'CONTEXT' part of the hlq.CONTEXT.resourcename



There are some profiles, or parts of profiles, that remain uppercase only as the values are provided by WebSphere MQ. These are listed here.

Mixed case security profile examples

- **Mixed case classes**
- RDEFINE MXQUEUE
MQ01.PAYROLL.Dept1
- **Uppercase classes**
- RDEFINE MQQUEUE
MQ01.PAYROLL.*
- Generic profile => covers other queue names as well.



The example on the left shows a queue called PAYROLL.Dept1 on queue manager MQ01. This queue name is mixed case. If you are using mixed case classes you can define a profile in the WebSphere MQ RACF class MXQUEUE as shown here.

On the right is an example of defining a profile for this mixed case queue name when using uppercase classes. The MQ RACF class MQQUEUE must be used and must be a generic definition. This will cover all queue names beginning with MQ01.PAYROLL, not just MQ01.PAYROLL.Dept1.

Section

MQ Explorer administration



In previous versions of WebSphere MQ, the z/OS Client Attachment Feature (CAF) was required if you wanted to administer MQ using MQ Explorer.

MQ Explorer without client attach feature

- z/OS can use up to five free client attachments to administer with MQ Explorer
- Must use SYSTEM.ADMIN.SVRCONN channel
- Default MAXINST(999999999)
- Must change MAXINST to five or less



In WebSphere MQ V7, z/OS users can create five “free” client attachments for use with MQ Explorer. These attachments must use the channel name SYSTEM.ADMIN.SVRCONN which is the default channel name used by the MQ Explorer. By default, server-connection channels are defined with the maximum instances. This definition will not allow any free attachments to connect to the queue manager. Any number greater than five is interpreted as zero. To use the free client attachments, you must first alter the server-connection channel definition to have MAXINST set to five or less. Ensure that your server-connection channel is secured by your enterprise policies.

MQ Explorer without CAF

The screenshot shows the IBM WebSphere MQ Explorer interface. On the left, a tree view displays 'Queue Managers' with sub-items 'MQ23 on 'win...', 'MQ24 on 'win...', 'TEST1', and 'TEST3'. A context menu is open over the 'Queue Managers' folder, with 'Add Remote Queue Manager...' selected. On the right, the 'Add Queue Manager' dialog box is open, showing 'Specify new connection details'. The 'Queue manager name' is 'MQ45'. The 'Host name or IP address' is 'wimmvs41', the 'Port number' is '1545', and the 'Server-connection channel' is 'SYSTEM.ADMIN.SVRCONN', which is highlighted with a red rectangular box. The dialog also includes options for 'Autoreconnect' and 'Automatically refresh information shown for this queue manager' with a refresh interval of 300 seconds.

MAXINST(5 or less)

```
+CSQX263I !MQ23 CSQXDDQM Client Attachment feature unavailable,  
admin channel SYSTEM.ADMIN.SVRCONN allowed  
connection L3D4099 (::ffff:9.180.164.249)
```



When channels are being allowed in without the client attach feature, message CSQX263I is issued. Message CSQX260E is issued if the connection is not allowed.

Section

ISPF panel changes



This section describes changes to MQ ISPF panels.

ISPF panels

```

IBM WebSphere MQ for z/OS - Main Menu

Complete fields. Then press Enter.

Action . . . . . 1      0. List with filter  4. Manage
                          1. List or Display  5. Perform
                          2. Define like    6. Start
                          8. Command      7. Stop

Object type . . . . . CLUSQMGR +
Name . . . . . *
Disposition . . . . . A Q=Qmgr, C=Copy, P=Private, G=Group,
                          S=Shared, A=All

Connect name . . . . . MQ45 - local queue manager or group
Target queue manager . . . . MQ45
                          - connected or remote queue manager for command input
Action queue manager . . . . MQ45 - command scope in group
Response wait time . . . . 30 5 - 999 seconds

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```



Existing panels now show new attributes. There are no new panels for new objects and commands like topic objects and subscription commands. The 24x80 panel is not large enough to effectively display, for example, a 10K topic string. The WebSphere MQ Explorer GUI is an alternative. There is also a command selection from the ISPF panel shown here.

ISPF panels command input

```
EDIT          HUGHSON.CSQUTIL.COMMANDS          Columns 00001 00072
***** Top of Data *****
000001 DISPLAY QL(SYSTEM.COMMAND.INPUT) ALL
***** Bottom of Data *****
```

Enter/edit MQSC commands. LineEdit (F4) to edit long lines, END (F3) to process commands, CANCEL (F12) to exit without processing commands, HELP (F1) for more help.

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z/OS enhancements

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The ISPF panels have been enhanced to allow any MQSC command to be entered in the same way it is in CSQUTIL program. The panel also checks the syntax of the command for errors.

ISPF panel command output

```
EDIT          HUGHSON.CSQUTIL.OUTPUT          Columns 00002 00073
***** Top of Data *****
000001 CSQU000I CSQUTIL IBM webSphere MQ for z/OS V7
000002 CSQU001I CSQUTIL Queue Manager Utility - 2008-06-02 00:26:13
000003 COMMAND TGTQMGR(MQ45) RESPTIME(30)
000004 CSQU127I Executing COMMAND using input from CSQUCMD data set
000005 CSQU120I Connecting to MQ45
000006 CSQU121I Connected to queue manager MQ45
000007 CSQU055I Target queue manager is MQ45
000008 DISPLAY QL(SYSTEM.COMMAND.INPUT) ALL
000009 CSQN205I COUNT=          3, RETURN=00000000, REASON=00000000
000010 CSQM401I !MQ45
000011 QUEUE(SYSTEM.COMMAND.INPUT)
000012 TYPE(QLOCAL)
000013 QSGDISP(QMGR)
000014 STGCLASS(SYSVOLAT)
000015 PSID(3)
000016 CFSTRUCT( )
000017 CLUSTER( )
000018 CLUSNL( )
```



This is an example of the output from the previous display command.

Section

Restrictions



This section describes a restriction for z/OS.

Section

Summary



This section provides a summary of enhancements to WebSphere MQ V7 on z/OS.

Summary

- RACF classes
- MQ Explorer administration
- ISPF panel changes
- Restrictions



There are new RACF classes to support mixed case profiles in WebSphere MQ V7 on z/OS. MQ Explorer administration on z/OS is possible without the Client Attach Feature. The ISPF panels now support MQSC commands.

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