



Installation and Migration to IBM MQ for z/OS

IBM Washington Systems Center

Lyn Elkins – elkinsc@us.ibm.com

Mitch Johnson – mitchj@us.ibm.com

Dorothy Quincy – Dorothy.quincy@ibm.com



Agenda

- **IBM MQ for z/OS Installation**
- Customizing a Queue Manager
- Creating a Queue Sharing Group
- Integrating with CICS and IMS
- Migrations Paths
- Summary



IBM MQ for z/OS Installation Information

- MQ for z/OS is installed using a standard SMP/E installation
 - FMID HMS9200/HMS9210 – z/OS Base
 - FMID Subsets (LTSR/CD):
 - **JMS9201**– U.S. English (ENU)
 - JMS9202– Japanese (JPN)
 - JMS9203 – Simplified Chinese (CHS)
 - JMS9204 – Upper Case English (ENP)
 - JMS9205– French (FRA)
 - **JMS9206**– Unix Services Components for IBM MQ, including JMS and HTTP
 - **JMS9208** - Unit Services Components web components for IBM MQ
- MQ Advanced for z/OS
 - FMID JMS9207 – MQ Managed File Transfer
 - NOTE: MQAMS no longer has a separate FMID



Areas involved in configuring a queue manager on z/OS

- MQ Administration
 - Implementation project ownership
- MVS System Programmers
 - APF authorization and other system changes
 - Allocation of HFS/ZFS
 - Allocation of CF list structures for QSG
- Security Administrator
 - User IDs /Groups
 - Infrastructure planning and environment controls
- Network Administrators
 - IP addresses and ports
 - DNS entries/Firewalls
- CICS, IMS and/or WebSphere system programmers/administrators
 - Implementation of adapters and bridges
- DB2 - DB2 resources (STOGROUP, DATABASES, etc) needed for QSG
- Applications
 - Planning queue and queue manager objects needed
 - Reviewing and implementing Change Management
- Automation



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Customizing a Queue Manager

- Customizing a 'stand alone' z/OS queue manager is simple:
 - Define system resources, e.g. subsystems, authorized data sets, OMVS mounts
 - Copy and tailor the sample JCL
 - Define the security resources
 - Submit the tailored jobs
 - Start the Queue Manager (MSTR)
 - Start the Channel Initiator (CHIN)

With sufficient authority, this can take an hour

- Especially if you have 'patterns' to use



JCL for the Queue Manager & CHIN Customization

- Sample members include:
 - CSQ4BSDS – Creates and activates the IBM MQ Bootstrap, creates and formats the queue manager log files
 - CSQ4PAGE – Creates and formats the IBM MQ Pagesets
 - CSQ4ZPRM – Creates the queue manager initiation attributes modules (zPARM)
 - CSQ4INYG – Commands to define objects that are normally required
 - For example the DLQ is defined as '++qmgr++.DEAD.QUEUE'
 - CSQ4INPX – Sample commands related to the channel initiator
 - For example START LISTENER TRPTYPE(TCP) PORT(++port-number++)
 - CSQ4CHIN – Sample Channel Initiator JCL Procedure
 - CSQ4MSTR – Sample Queue Manager JCL Procedure
- Other JCL members
 - Many samples not included here, some to 'undo' creation to define additional objects, etc.



To make customization a bit easier!

- We use a REXX to make customization simpler
 - Includes most of the '++' variables used in the sample JCL to create a queue manager and channel initiator
- Provide with workshop material or upon request

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
-----
VIEW          WMQ710.QML#.SCSQPROC(QML#EDIT) - 01.00          Columns 00001 00072
Command ==>          Scroll ==> PAGE
***** ***** Top of Data *****
000001 ISREDIT MACRO NOPROCESS
000002 ADDRESS ISREDIT
000003 "change '++THLQUAL++' 'WMQ710' all"
000004 "change '++HLQ++' 'SYS1.MQM710' all"
000005 "change '++LANGLETTER++' 'E' all"
000006 /* **** BSDS CHANGES **** */
000007 "change '++VOLBSDS1++' 'Q70001' all"
000008 "change '++VOLLOG1A++' 'Q70002' all"
000009 "change '++VOLLOG1B++' 'Q70003' all"
000010 /* **** PAGE CHANGES **** */
000011 "change '++VOL0++' 'Q70001' all"
000012 "change '++VOL1++' 'Q70001' all"
000013 "change '++VOL2++' 'Q70002' all"
000014 "change '++VOL3++' 'Q70003' all"
000015 "change '++VOL4++' 'Q70002' all"
000016 /* **** ZPRM CHANGES **** */
000017 "change '++HLQ.USERAUTH++' 'WMQ710.++QML#++.AUTHLIB' all"
000018 "change '++NAME++' 'QML#ZPRM' all"
000019 /* **** MSTR CHANGES **** */

```



IBM MQ - Modifying Queue managers

- **Queue Manager changes needed in response to environment or volume changes**
 - zPARM changes require an outage
 - Still a few non-dynamic options
 - Adding logs, adding pagesets no longer requires an outage
 - Do not turn off SMF Statistics (SMFSTAT=YES)



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JCL for the Queue Sharing Group tasks

- Sample JCL members include:
 - CSQ45CSG – Creates the DB2 Storage Group
 - CSQ45CDB – Creates the DB2 Database
 - CSQ45CTS – Creates the DB2 Table Spaces
 - CSQ45CTB – Creates the DB2 Tables
 - CSQ45BPL – Bind the DB2 Plans
 - CSQ45AQS – Creates the queue sharing group entry into the DB2 tables
 - CSQ45AQM – Creates the queue manager entries in the DB2 tables
 - CSQ4CFRM – Sample CFRM policy definitions for IBM MQ list structures
 - CSQ4SMDS – Sample job to define and initialize a SMDS data set

JCL for the Queue Sharing Group tasks

- To create the Queue Sharing Group:
 - Customize the JCL
 - Your DBA should assist with customization of all except the CFRM sample
 - CSQ45AQM defines the queue managers to the DB2 data sharing group tables for IBM MQ, this may be run multiple times as queue managers are added
 - The DBA may have to run the jobs depending on DB2 security requirements
 - The SYSPROG should assist with the customization of CSQ4CFRM
 - The SYSPROG may have to do the coupling facility policy definition
 - Customize the 'zPARM' for each queue manager
 - Update the QSGDATA parm, for example:
 - QSGDATA=(QSGM,DSN0PLEX,DSN0,4,4)
 - Where QSGM – is our QSG name
 - DSN0PLEX is the DB2 Data Sharing Group name
 - DSN0 is the DB2 connection name
 - 4 is the number of server tasks used for accessing DB2 (range is 4-10)
 - 4 is the number of tasks used for accessing the BLOBS (range is 4-10)

JCL for the Queue Sharing Group tasks

```
//STEP01 EXEC PGM=IXCMIAPU
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
DATA TYPE(CFRM) REPORT(YES)
/* DSN(MPXPLEX.CFRMCDS.PRI) */
DEFINE POLICY NAME(POLICY2) REPLACE(YES)
CF NAME(MPXCF1) TYPE(SIMDEV) MFG(IBM) PLANT(EN) CPCID(00) DUMPSPACE(5000)
PARTITION(0) SEQUENCE(0000000MQCF1)
CF NAME(MPXCF2) TYPE(SIMDEV) MFG(IBM) PLANT(EN) CPCID(00) DUMPSPACE(5000)
PARTITION(0) SEQUENCE(0000000MQCF2)
. . . . .
STRUCTURE NAME(QSGMCSQ_ADMIN) SIZE(80M) INITSIZE(80M)
PREFLIST(MPXCF1) FULLTHRESHOLD(85)
STRUCTURE NAME(QSGMCSQSYSAPPL) SIZE(81920) INITSIZE(30720) MINSIZE(20480)
PREFLIST(MPXCF1) FULLTHRESHOLD(85) ALLOWAUTOALT(YES)
STRUCTURE NAME(QSGMNRMLMSGGS) SIZE(81920) INITSIZE(40960) MINSIZE(30720)
PREFLIST(MPXCF1) FULLTHRESHOLD(75) ALLOWAUTOALT(YES)
STRUCTURE NAME(QSGMLARGMSGGS) SIZE(81920) INITSIZE(30720) MINSIZE(20480)
PREFLIST(MPXCF1) FULLTHRESHOLD(85) ALLOWAUTOALT(YES)
STRUCTURE NAME(QSGMSMDSMSGGS) SIZE(81920) INITSIZE(30720) MINSIZE(20480)
PREFLIST(MPXCF1) FULLTHRESHOLD(85) ALLOWAUTOALT(YES)
. . . . .
```

- CF Structure v. MQ CFSTRUCT
 - QSGMNRMLMSGGS - NRMLMSGGS
 - QSGMLARGMSGGS - LARGMSGGS
 - QSGMSMDSMSGGS - SMDSMSGGS
- Coupling Facility Sizing tool (CFSizer)
 - <http://www-947.ibm.com/systems/support/z/cfsizer/>

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Adding IBM MQ to CICS

- Depending on the CICS version, you may be using different version of the IBM MQ adapter and Bridge
 - For CICS V3.1 use the IBM MQ provided code
 - Resources definitions provided in IBM MQ groups CSQCAT1 and CSQCKB
 - > Use the DFHCSUP utility to define the IBM MQ CICS Adapter resources in member CSQ4B100 and the IBM MQ CICS Bridge resources in member CSQ4CKBC in SYS1.MQM710.SCSQPROC
 - For CICS V3.2, V4.1 and later, use the CICS provided code
 - The threadsafe version of the adapter and bridge code is now owned and delivered by CICS
 - Noticeably better performance
 - Uses the same TCB as DB2
 - Resource definitions provided in CICS group DFHMQ (remove groups CSQCAT1 and CSQCKB from any group lists.)

Adding IBM MQ to a CICS region

- Update the CICS region startup JCL:

```
//STEPLIB DD DSN=&INDEX1..SDFHAUTH,DISP=SHR
//      DD DSN=&INDEX1..SDFJAUTH,DISP=SHR
//      DD DSN=SYS1.MQ920.SCSQANLE,DISP=SHR      (CICS TS V3.x only)
//      DD DSN=SYS1.MQ920.SCSQAUTH,DISP=SHR
//DFHRPL DD DSN=&INDEX1..SDFHLOAD,DISP=SHR
//      DD DSN=SYS1.LEMVS.SCEECICS,DISP=SH
//      DD DSN=SYS1.LEMVS.SCEERUN2,DISP=SH
//      DD DSN=SYS1.LEMVS.SCEERUN,DISP=SHR
//      DD DSN=SYS1.MQ920.SCSQCICS,DISP=SHR      (IBM MQ CICS Samples)
//      DD DSN=SYS1.MQ920.SCSQLOAD,DISP=SHR
//      DD DSN=SYS1.MQ920.SCSQANLE,DISP=SHR      (CICS TS V3.x only)
//      DD DSN=SYS1.MQ920.SCSQAUTH,DISP=SHR
//      DD DSN=DSNA10.RUNLIB.LOAD,DISP=SHR
```

- Note: Consider using a CICS LIBRARY resources to define the DFHRPL data sets so they are dynamically allocated

Adding IBM MQ to a CICS region

- Update the CICS initialization parameters:
 - Specify MQCONN=YES
 - For CICS TS V3.1
 - INITPARM=(CSQCPARM='SN=QML2,TN=001,IQ=CICS01.INITQ')
 - For CICS TS V3.2
 - INITPARM=(DFHMQPRM='SN=QML2,IQ=CICS01.INITQ')
 - For CICS TS V4.x and later
 - Define a MQCONN resources in the CSD
 - DEFINE MQCONN(QSGM) MQNAME(QSGM)
INITQNAME(CICS01.INITQ)
- Recycle CICS to pick up changes

Adding IBM MQ to a CICS region

- Use CICS transaction CKQC to start, stop, modify and display connection details

(A) CICS [MPX20017] - PowerTerm Interconnect Demo

File Edit Terminal Communication Sessions Options Script Help

CKQCM2 Display Connection panel

Read connection information. Then press F12 to cancel.

CICS Applid = CTST0R05 Connection Status = Connected QMgr name= QML4
 Mqname = QSGM Tracing = On API Exit = Off
 Initiation Queue Name = (Not specified at connect time)

----- STATISTICS -----

Number of in-flight tasks = 0 Total API calls = 0
 Number of running CKTI = 0

APIs and flows analysis				Syncpoint		Recovery	
Run OK	0	MQINQ	0	Tasks	0	Indoubt	0
Futile	0	MQSET	0	Backout	0	UnResol	0
MQOPEN	0	----- Flows -----		Commit	0	Commit	0
MQCLOSE	0	Calls	0	S-Phase	0	Backout	0
MQGET	0	SyncComp	0	2-Phase	0		
GETWAIT	0	SuspReqd	0				
MQPUT	0	Msg Wait	0				
MQPUT1	0	Switched	0				

F1=Help F12=Cancel Enter=Refresh

MB 01/001

F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12

3270 Display 1:1 Caps Wrap Hold On Line

MQMonitor - CKTI

TRIGGER (MQ Monitor Definition)

Attributes

CICS1 ▸ CICS1 ▸ TRIGGER ▾

type filter text

Name	CICS Name	Value
Basic		
Autostart	AUTOSTART	YES
CSD Group	CSDGROUP	CICS1MQ
Description	DESCRIPTION	
Enabled Status	STATUS	ENABLED
Monitor Data	MONDATA	
Monitor Transaction	TRANSACTION	CKTI
Monitor Userid	MONUSERID	CICSUSER
MQ Queue Name	QNAME	&APPLID..TRIGGER.INITQ
Name	NAME	TRIGGER
Target Userid	USERID	

mpxm

File Edit View Communication Actions Window Help

```
OVERTYPE TO MODIFY                                CICS RELEASE = 0710
CEDA ALTER MQMonitor( TRIGGER )
MQMonitor      : TRIGGER
Group          : CICS1MQ
DEscription    ==>
Status         ==> Enabled           Enabled | Disabled
MONITOR ATTRIBUTES
Autostart      ==> Yes               Yes | No
MONData        ==>
(Mixed Case)   ==>
               ==>
MONUserid      ==> CICSUSER
Qname          ==> &APPLID..TRIGGER.INITQ
Transaction    ==> CKTI             (Mixed Case)
APPLICATION ATTRIBUTES
Userid         ==>
DEFINITION SIGNATURE
+ DEFINetime   : 07/08/17 17:06:42

SYSID=CICS APPLID=CICS1

PF 1 HELP 2 COM 3 END                6 CRSR 7 SBH 8 SFH 9 MSG 10 SB 11 SF 12 CNCL
MA E                                06/022
Connected to remote server/host mpxm using lu/pool SC0TCP29 and port
```

MQMonitor – CICS MQ Bridge

BRIDGE (MQ Monitor Definition)

Attributes

CICS1 ▸ CICS1 ▸ BRIDGE ▾

type filter text

Name	CICS Name	Value
Basic		
Autostart	AUTOSTART	YES
CSD Group	CSDGROUP	CICS1MQ
Description	DESCRIPTION	
Enabled Status	STATUS	ENABLED
Monitor Data	MONDATA	WAIT=50,MSG=BOTH,AUTH=VERIFY_ALL,Q=CICS.BRIDGE.REQUEST
Monitor Transaction	TRANSACTION	CKBR
Monitor Userid	MONUSERID	CICSUSER
MQ Queue Name	QNAME	
Name	NAME	BRIDGE
Target Userid	USERID	

```

OVERTYPE TO MODIFY                                CICS RELEASE = 0710
CEDA ALTER MQMonitor( BRIDGE )
MQMonitor      : BRIDGE
Group          : CICS1MQ
DEscription    ==>
Status         ==> Enabled           Enabled | Disabled
MONITOR ATTRIBUTES
Autostart      ==> Yes               Yes | No
MONData       ==> WAIT=50,MSG=BOTH,AUTH=VERIFY_ALL,Q=CICS.BRIDGE.REQUEST
(Mixed Case)  ==>
==>
MONUserid     ==> CICSUSER
Qname         ==>
Transaction   ==> CKBR               (Mixed Case)
APPLICATION ATTRIBUTES
Userid        ==>
DEFINITION SIGNATURE
+ Definetime   : 07/08/17 17:09:02

SYSID=CICS APPLID=CICS1

PF 1 HELP 2 COM 3 END                6 CRSR 7 SBH 8 SFH 9 MSG 10 SB 11 SF 12 CNCL
MA E                                01/014
Connected to remote server/host mpxm using lu/pool SC0TCP29 and port

```

Adding IBM MQ to IMS

- Update the IMS control region and dependent (BMP,MPP) region's JCL
 - Add MQ920.SCSQNLE and MQ920.SCSQAUTH to DDNAME
 - STEPLIB if all other data sets in the list are authorized otherwise add to
 - DFSESL if one of the data sets in the STEPLIB sequence is not authorized
 - Create a subsystem member (SSM) in the IMS PROCLIB (e.g. IMSBQML1) including a line for each queue manager that will be accessed.

QML1,MQMX,CSQQESMT,,R,
QML1,MQM1,CSQQESMT,,R,
QML3,MQM2,CSQQESMT,,R,
QML5,MQM3,CSQQESMT,,R,
QML7,MQM4,CSQQESMT,,R,
QML9,MQM5,CSQQESMT,,R,
 - Add the SSM parameter (SSM=QML1) to the program parameter list for the control region (IMS PROCLIB(DFSPBxxx), where SUFFIX=xxx) and dependent region's execution JCL



Adding IBM MQ to IMS

- The IMS adapter cannot access the IMS PROCLIB so the names of the IBM MQ queue managers and their corresponding LITs must be defined in the queue manager definition table, CSQQDEFV.
- An MQCONN or MQCONNX call associates the *name* input parameter and the *hconn* output parameter with the name label and, therefore, the LIT in the CSQQDEFV entry. Further MQ calls passing the *hconn* parameter use the LIT from the CSQQDEFV entry identified in the MQCONN or MQCONNX call to direct calls to the WebSphere MQ queue manager defined in the IMS SSM PROCLIB member with that same LIT.
- In summary, the name parameter on the MQCONN or MQCONNX call identifies a LIT in CSQQDEFV and the same LIT in the SSM member identifies a WebSphere MQ queue manager.



Adding IBM MQ to IMS

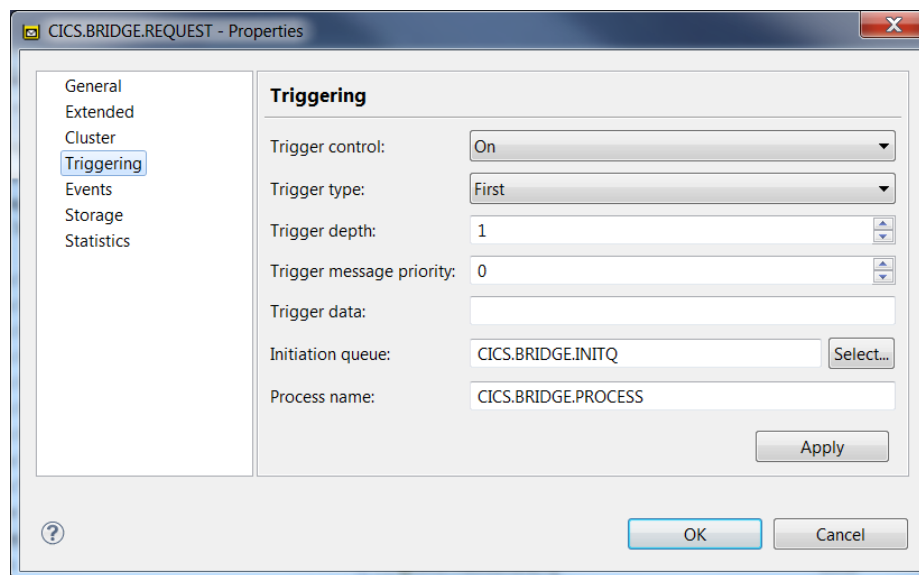
- Assemble and link-edit CSQQDEFV to add support for local queue managers. Add the load module library to STEPLIB or DFSESL as above.

```
CSQQDEFV CSECT ,  
CSQQDEFV AMODE 31  
CSQQDEFV RMODE ANY  
    CSQQDEFX TYPE=DEFAULT,NAME=QML1,LIT=MQMX,  
    CSQQDEFX TYPE=ENTRY,NAME=QML1,LIT=MQM1  
    CSQQDEFX TYPE=ENTRY,NAME=QML3,LIT=MQM2  
    CSQQDEFX TYPE=ENTRY,NAME=QML5,LIT=MQM3  
    CSQQDEFX TYPE=ENTRY,NAME=QML7,LIT=MQM4  
    CSQQDEFX TYPE=ENTRY,NAME=QML9,LIT=MQM5  
    CSQQDEFX TYPE=END  
END  CSQQDEFV
```



MQ Resources for the CICS MQ Bridge

- Request Queue - Triggering

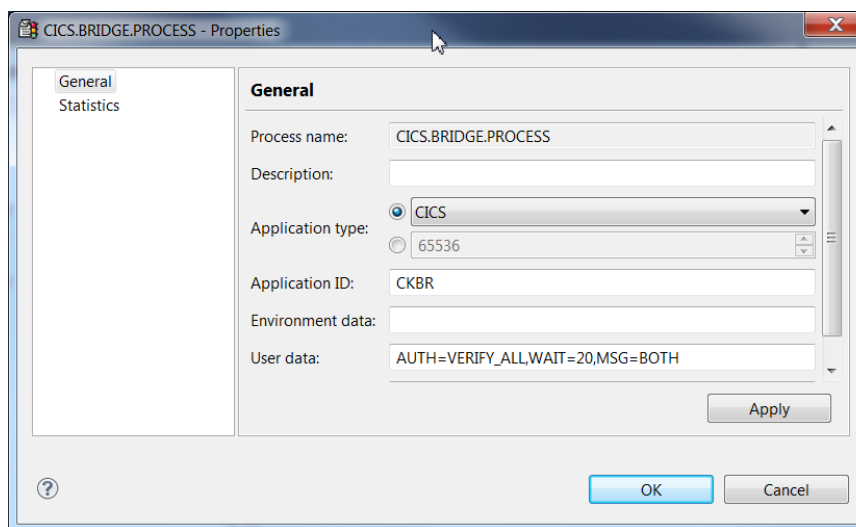


The screenshot shows the 'CICS.BRIDGE.REQUEST - Properties' dialog box with the 'Triggering' tab selected. The left sidebar lists 'General', 'Extended', 'Cluster', 'Triggering' (selected), 'Events', 'Storage', and 'Statistics'. The main area contains the following fields:

- Trigger control: On
- Trigger type: First
- Trigger depth: 1
- Trigger message priority: 0
- Trigger data: (empty text field)
- Initiation queue: CICS.BRIDGE.INITQ (with a 'Select...' button)
- Process name: CICS.BRIDGE.PROCESS

Buttons at the bottom include '?', 'OK', 'Cancel', and 'Apply'.

- CICS Bridge Process
 - CKBR transaction
 - Configure security



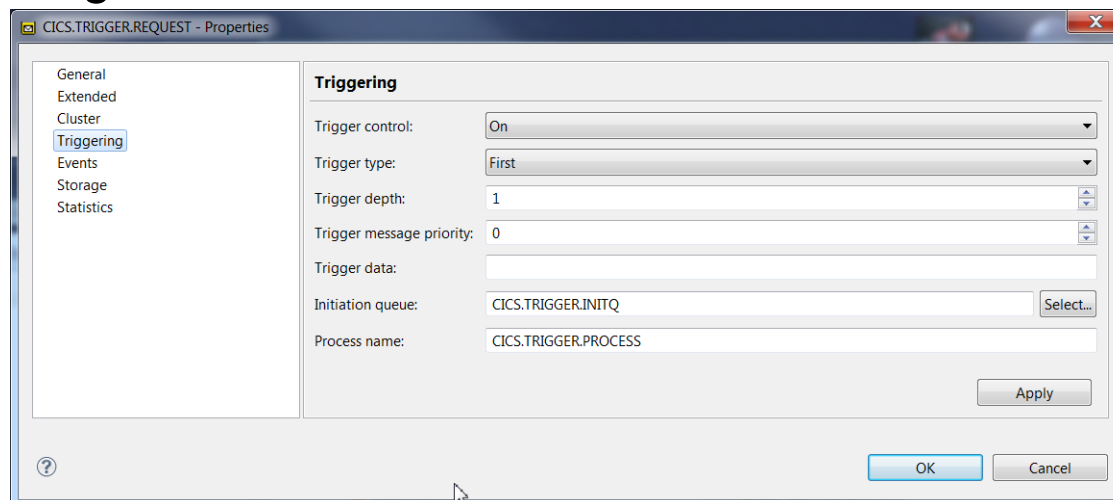
The screenshot shows the 'CICS.BRIDGE.PROCESS - Properties' dialog box with the 'General' tab selected. The left sidebar lists 'General' (selected) and 'Statistics'. The main area contains the following fields:

- Process name: CICS.BRIDGE.PROCESS
- Description: (empty text field)
- Application type: CICS (selected with a radio button, with '65536' as an alternative option)
- Application ID: CKBR
- Environment data: (empty text field)
- User data: AUTH=VERIFY_ALL, WAIT=20, MSG=BOTH

Buttons at the bottom include '?', 'OK', 'Cancel', and 'Apply'.

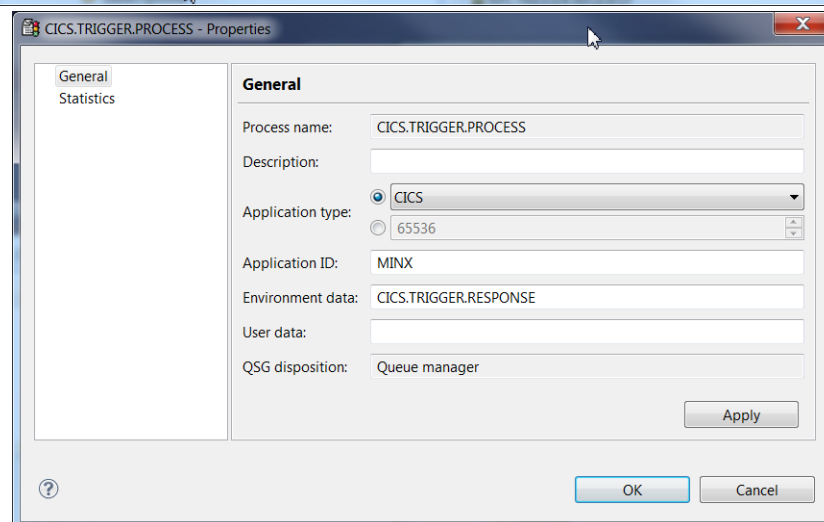
MQ Resources for the CICS Trigger Monitor

- Request Queue - Triggering



The screenshot shows the 'CICS.TRIGGER.REQUEST - Properties' dialog box. On the left is a tree view with 'Triggering' selected. The right pane is titled 'Triggering' and contains the following fields: 'Trigger control' (On), 'Trigger type' (First), 'Trigger depth' (1), 'Trigger message priority' (0), 'Trigger data' (empty), 'Initiation queue' (CICS.TRIGGER.INITQ with a 'Select...' button), and 'Process name' (CICS.TRIGGER.PROCESS). At the bottom right are 'Apply', 'OK', and 'Cancel' buttons.

- CICS Trigger Monitor – Process
 - User transaction



The screenshot shows the 'CICS.TRIGGER.PROCESS - Properties' dialog box. On the left is a tree view with 'General' selected. The right pane is titled 'General' and contains the following fields: 'Process name' (CICS.TRIGGER.PROCESS), 'Description' (empty), 'Application type' (CICS selected, with 65536 in a sub-field), 'Application ID' (MINX), 'Environment data' (CICS.TRIGGER.RESPONSE), 'User data' (empty), and 'QSG disposition' (Queue manager). At the bottom right are 'Apply', 'OK', and 'Cancel' buttons.



MQ Resources for the IMS Bridge

Request Queue – Storage Class Properties

The screenshot shows the 'Storage' tab of the 'IMS.BRIDGE.REQUEST - Properties' dialog. The left sidebar lists 'General', 'Extended', 'Cluster', 'Triggering', 'Events', 'Storage' (selected), and 'Statistics'. The main area contains the following fields:

- Backout requeue queue: [] [Select...]
- Backout threshold: 0
- Harden get backout: Not hardened
- NPM class: Normal
- Storage class name: IMSBRIDG
- Coupling facility structure name: []

Buttons at the bottom include '?', 'OK', 'Cancel', and 'Apply'.

Storage Class

The screenshot shows the 'General' tab of the 'IMSBRIDG - Properties' dialog. The left sidebar lists 'General' (selected). The main area contains the following fields:

- Storage class name: IMSBRIDG
- Description: []
- Page set ID: 1
- QSG disposition: Queue manager
- XCF group name: OTMAGRP
- XCF member name: OTMAMEM
- Passticket appl name: []

Buttons at the bottom include '?', 'OK', 'Cancel', and 'Apply'.

Queue Manager's zPARM Module

```
CSQ6SYSP Macro
  OTMACON=(OTMAGRP,,DFSYDRU0,2147483647,CSQ),
```

IMS PROCLIB DFSBPxxx member

```
OTMA=Y,
OTMAMEM=OTMAMEM
OTMASE=
GRPNAME=OTMAGRP,
```



MQ Resources for the IMS Trigger Monitor

- IMS trigger process

The screenshot shows the 'IMS.TRIGGER.PROCESS - Properties' dialog box with the 'General' tab selected. The 'General' tab contains the following fields:

- Process name: IMS.TRIGGER.PROCESS
- Description: (empty)
- Application type: ☒ IMS (selected), ☐ 65536
- Application ID: ATSIMINX
- Environment data: IMS.TRIGGER.RESPONSE
- User data: QMZA

Buttons at the bottom include '?', 'Apply', 'OK', and 'Cancel'.

- IMS batch trigger JCL

```
//CSQQTRMN EXEC PROC=IMSBATCH,MBR=CSQQTRMN,PSB=CSQQTRMN,IMSID=IMSB,
//          SOUT='*',NBA=6,OBA=5,TIME=60,SSM=QMZA
//DFSSTAT  DD SYSOUT=*
//G.DFSRESL DD DISP=SHR,DSN=IMS110.SDFSRESL
//          DD DISP=SHR,DSN=MQ920.MQM.SCSQAUTH
//          DD DISP=SHR,DSN=MQ920.SCSQAUTH
//CSQQUT1  DD *
QMGRNAME=
INITQUEUEUENAME=IMS.TRIGGER.INITQ
CONSOLEMESSAGES=YES
LTERM=PMaster
//CSQQUT2  DD SYSOUT=*
```

MQ CSQUTIL - MAKEDEFs

```
//CSQUTIL EXEC PGM=CSQUTIL,PARM='QMZA'  
//STEPLIB DD DISP=SHR,DSN=MQ920.SCSQANLE  
// DD DISP=SHR,DSN=MQ920.SCSQAUTH  
// DD DISP=SHR,DSN=MQ920.SCSQLOAD  
//MDOUT DD SYSOUT=*  
//SYSPRINT DD SYSOUT=*  
//SYSIN DD *  
    COMMAND DDNAME(CMDINP) MAKEDEF(MDOUT)  
//CMDINP DD *  
DISPLAY QUEUE(CICS.BRIDGE.*) ALL  
DISPLAY QUEUE(IMS.BRIDGE.*) ALL  
DISPLAY PROCESS(CICS.TRIGGER.PROCESS) ALL  
DISPLAY PROCESS(IMS.TRIGGER.PROCESS) ALL  
DISPLAY PROCESS(ODM.PROCESS) ALL
```

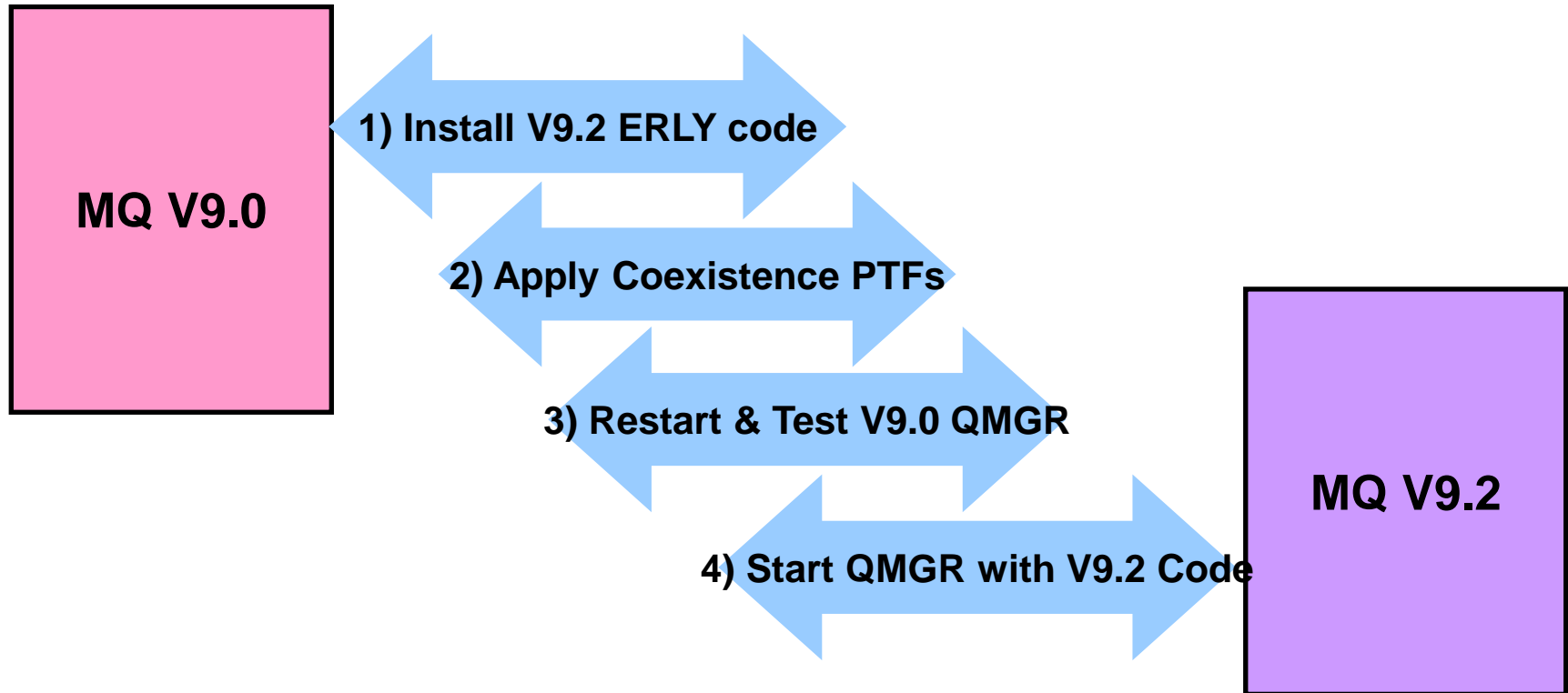
- Generates corresponding “DEFINE” commands for the resources displayed
- Useful for saving resource definitions in a repository or for recreation in another queue manager.

Agenda

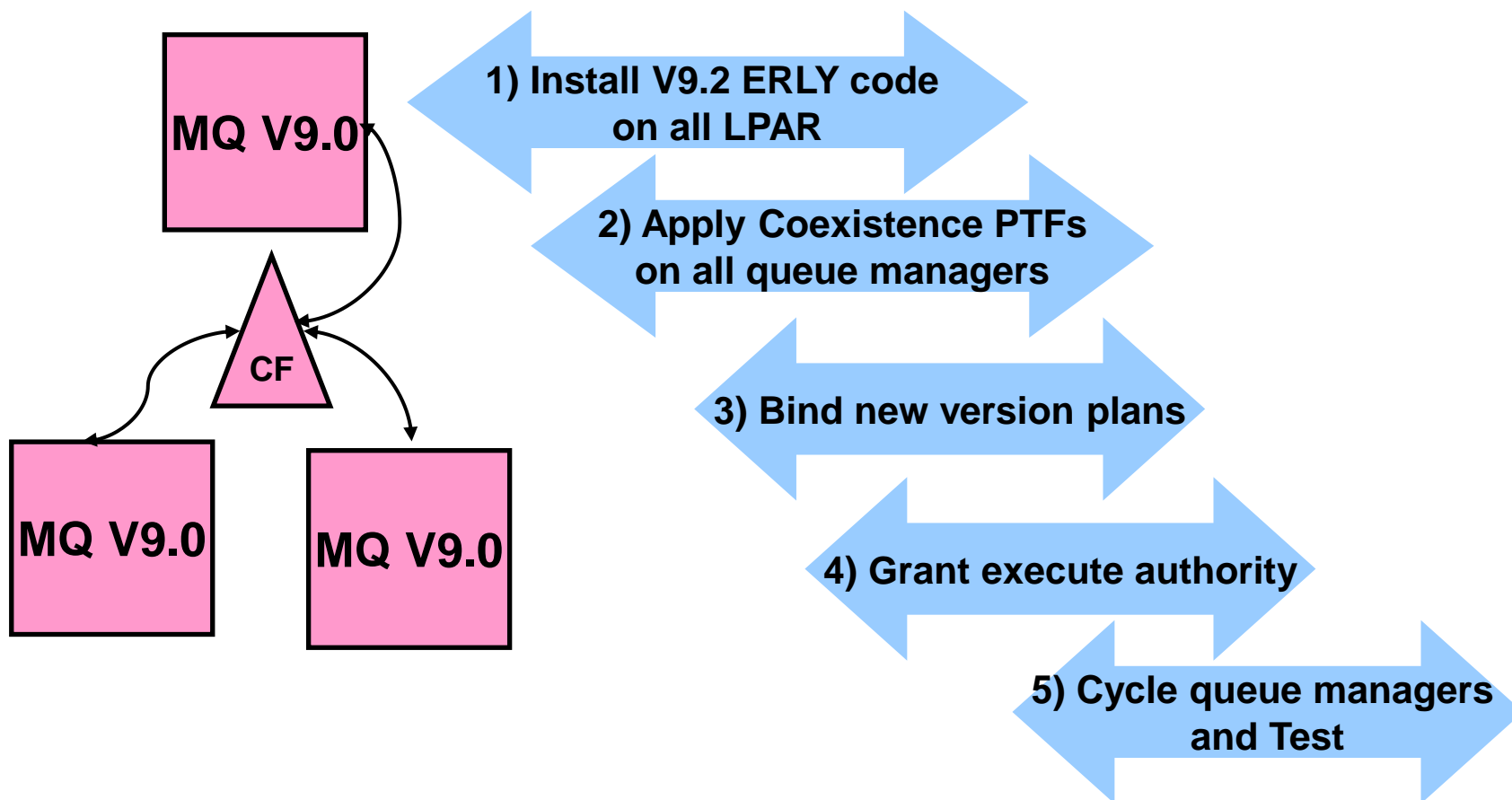
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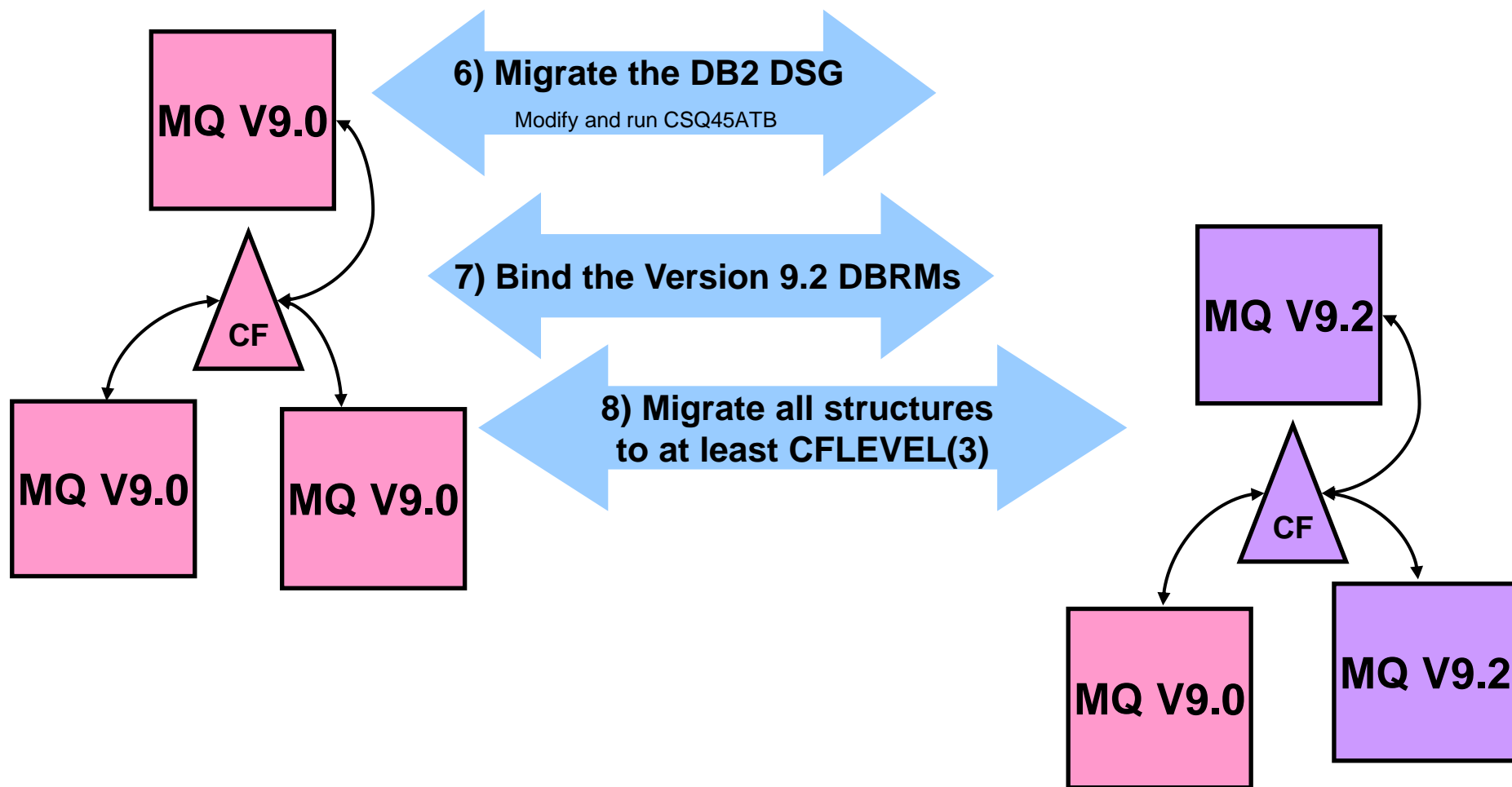
MQ V9 to V9.2 Migration



MQ V9.0 QSG to V9.2 QSG Migration



MQ V9.0 QSG to V9 QSG Migration



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- Integrating with CICS and IMS
- Migrations Paths
 - https://www.ibm.com/docs/en/ibm-mq/9.2?topic=zos-migrating-mq-order-tasks#q116200_beforemig
- **Questions?**

