



Problem Determination using JES logs

Audience level: knowledge of MQ or z/OS

Skillset: z/OS Systems Programming, MQ Administration

Introduction

This lab is designed to be an introduction to problem determination and fixes. It will use the Queue Manager JES log for PD and to verify the solution, and CSQUTIL to enter the corrective commands.

Lab Steps

- 1) If you have shut down the PCOMM connection to the MQS1 LPAR, please refer back to Lab 1 to re-establish the connection.
- 2) From the SDSF DA panel, please use a '?' (question mark) beside the ZQS1MSTR running instance, as shown.

SDSF	DA	MQS1	MQS1	PAG	0	CPU	5			LINE	57-
NP	JOBNAME	StepName	ProcStep	JobID		Owner		C	Pos	DP	Real
?	ZQS1MSTR	ZQS1MSTR	PROCSTEP	STC08489		SYSPROG		NS	FE	24T	
	TCPID	TCPID	TCPID	STC08489		SYSPROG		NS	FE	0070	

- 3) The outputs from the queue manager steps (from start-up thru anything going on right now) are displayed.

SDSF	JOB	DATA	SET	DISPLAY	-	JOB	ZQS1MSTR	(STC08489)		LINE	1-6
NP	DDNAME	StepName	ProcStep	DSID	Owner		C	Dest			
	JESMSG LG	JES2		2	SYSPROG		S				
	JESJCL	JES2		3	SYSPROG		S				
	JESYSMSG	JES2		4	SYSPROG		S				
	CSQOUT1	ZQS1MSTR		101	SYSPROG		S				
	CSQOUT2	ZQS1MSTR		102	SYSPROG		S				
	CSQOUTT	ZQS1MSTR		103	SYSPROG		S				

- 4) Use an 's' under the 'NP' column to select the JESMSG LG. First we will look at some general information about the queue manager that shows up during queue manager start-up:
 - a. Some important bits of information about the queue manager are in the very first part of the display. When doing problem determination it can be critical to know some of the details found here:

```

JES2 JOB LOG -- SYSTEM MQS1 -- NODE
12.50.45 STC08489 ---- MONDAY, 26 FEB 2024 ----
12.50.45 STC08489 IEF005I START ZQS1MSTR WITH JOBNAME ZQS1MSTR IS ASSIGNED TO U
12.50.46 STC08489 $HASP373 ZQS1MSTR STARTED
12.50.46 STC08489 CSQY000I ZQS1 IBM MQ for z/OS V9.3.3 CDR
12.50.46 STC08489 CSQY001I ZQS1 QUEUE MANAGER STARTING, USING PARAMETER MODULE
12.50.46 STC08489 CSQ3111I ZQS1 CSQYSAMD - EARLY PROCESSING PROGRAM IS V9.3.3 L
092 010-000
12.50.46 STC08489 CSQY100I ZQS1 SYSTEM parameters ...
12.50.46 STC08489 CSQY101I ZQS1 LOGLOAD=500000
12.50.46 STC08489 CSQY102I ZQS1 CMDUSER=CSQOPR, QMCCSID=0, ROUTCDE=( 1)
12.50.46 STC08489 CSQY103I ZQS1 SMFACCT=NO (00000000), SMFSTAT=NO (00000000),
096 STATIME=30, ACCTIME=-1
12.50.46 STC08489 CSQY104I ZQS1 OTMACON= 097
097 (, , DFSYDRU0, 2147483647, CSQ)

```

- b. The first piece of information is the start-up date and time (circled in Orange above). This can be especially helpful if the queue manager was supposed to have been cycled or started recently but shows an older date and or time.
- c. The version of the queue manager is next, in this case showing that we are on V 9.3.3 – the Continuously Delivery release. It is circled in Green. Note that what you may see will indicate a higher CD version than this.
- d. The early code version is also given, and is circled in purple. Quite regularly this is at a higher version level than the queue manager code, as when migrating between releases and CD versions the early code version is applied first.
- e. The system parameters are next – this contains the ‘z-parms’ or the results of the assembly and link of the macros that direct the queue manager start-up. In this case we are looking for the QSGDATA, to make sure it is correct for this queue manager instance.
- f. Entering “F QSGDATA” on the command line and hitting the enter key finds that queue manager attribute. It should look as follows:

```

SDSF OUTPUT DISPLAY ZQS1MSTR STC08489 DSID 2 LINE CHARS 'QSGDATA' FOUND
COMMAND INPUT ==> SCROLL ==> CSR
12.50.46 STC08489 CSQY107I ZQS1 QSGDATA=(QSGA,DB3AG,D3AG,4,4)
12.50.46 STC08489 CSQY108I ZQS1 RESAUDIT=YES, QINDXBLD=WAIT, CLCACHE=STATIC
12.50.46 STC08489 CSQY131I ZQS1 EXCLMSG=()

```

These attributes are the Queue Sharing Group (QSG) name, or QSGA; the Db2 data sharing group name, or DB3AG; the Db2 group attach name, or D3AG; the number of Db2 server threads to start, which defaults to 4; and the number of Db2 Blob tasks to start, which again defaults to 4.

- g. Enter F 'RESTART COMPLETED' command to make sure the queue manager was successful in the start-up. It should show up like this:

```
SDSF OUTPUT DISPLAY ZQS1MSTR STC08489 DSID      2 LINE  CHARS 'COMPLETE' FOUND
COMMAND INPUT ===>                                SCROLL ===> CSR
13.01.29 STC08489 CSQR002I ZQS1 RESTART COMPLETED
13.01.29 STC08489 CSQP018I ZQS1 CSQPBCKW CHECKPOINT STARTED FOR ALL BUFFER POOL
13.01.29 STC08489 CSQP019I ZQS1 CSQPDWP2 CHECKPOINT COMPLETED FOR BUFFER 401
401          POOL 1, 2 PAGES WRITTEN
```

- h. There may be these error messages following the RESTART COMPLETED messages. They need to be addressed, as lengthy times between the BACKUP CFSTRUCT commands will impact a queue manager's resilience. Note which structures need to be backed-up (I do not believe there are 4, but you have the space):

```
-----
-----
-----
-----
```

- i. To back-up the Coupling facility structures, commands can be entered directly into the queue manager, like the +cpf START QMGR command, or we can use a batch job to send the commands to the queue manager. The advantage to the batch job is that it can be used again. Before building the batch job, let's look for another error to correct.
- j. In the JESMSG LG for the queue manager, search for SYSTEM.QSG.TRANSMIT.QUEUE. You might see this:

```
16.53.21 STC08498 CSQM056E ZQS1 CSQMIGQA MQOPEN failed for queue 606
606          SYSTEM.QSG.TRANSMIT.QUEUE, MQRC=2085 (MQRC_UNKNOWN_OBJECT_NAME)
```

What this means is that a standard SYSTEM queue used for QSGs has not been defined. It should be defined in these test environments, just in case there is a need to test the QSG transmission option.

- k. To make things a bit easier, please enter the START command on the command line. This will start a 2nd session, allowing a split screen so to reduce the typing necessary.

```
Display Filter View Print Options Search Help
-----
SDSF OUTPUT DISPLAY ZQS1MSTR STC08498 DSID 2 LINE 296 COLUMNS 02- 81
COMMAND INPUT ==> start
16.53.21 STC08498 CSQI024I ZQS1 CSQIDUSE Restart RBA for system as 600
600 configured=0000000000000000
```

- l. When the normal ISPF Primary Options menu appears, use the command 'swapbar.' This will display the sessions, allowing an easy toggle method between them.

```
Menu Utilities Compilers Options Status Help
-----
ISPF Primary Option Menu

0 Settings      Terminal and user parameters      User ID . : USER1
1 View          Display source data or listings    Time. . . : 17:08
2 Edit          Create or change source data       Terminal. : 3278
3 Utilities     Perform utility functions         Screen. . : 2
4 Foreground    Interactive language processing    Language. : ENGLISH
5 Batch         Submit job for language processing   Appl ID . : ISR
6 Command       Enter TSO commands                TSO logon : IKJACCT
7 Dialog Test   Perform dialog testing            TSO prefix: USER1
9 IBM Products  IBM program development products   System ID : MQS1
10 SCLM         SW Configuration Library Manager   MVS acct. : ACCNT#
11 Workplace    ISPF Object/Action Workplace       Release . : ISPF 8.1
12 z/OS System  z/OS system programmer applications
13 z/OS User    z/OS user applications

Enter X to Terminate using log/list defaults

Option ==> swapbar
```

- m. The swapbar looks like what is shown, the sessions are in white on these displays (- before the session type shows the last session used, the * indicates the current session). To toggle between the sessions, put the cursor on your selection and use the enter key. On the command line, enter an '=3.14' (without the quotes) to help find the missing queue definition. This will take us to the 'Search for' facility.

```
Option ==> =3.14
```

```
F1=Help
```

```
F2=Split
```

```
F3=Exit
```

```
F7=Backward
```

```
F10=Actions F12=Cancel
```

```
-SDSF
```

```
*ISR@PRI
```

- n. To search for the missing queue name, please enter the partial queue name (copy from the SDSF session where it was found) and search the SCSQPROC library for this queue manager.

```
Menu RefList Utilities Help
Search-For Utility
Strings found
More: +
Search String . . . SYSTEM.QSG.TRANSMIT
ISPF Library:
Project . . .
Group . . .
Type . . .
Member . . . (Blank or pattern for member selection list,
               "*" for all members)
Other Partitioned, Sequential or VSAM Data Set:
Data Set Name . . . 'ZQS1.SCSQPROC(*)'
Volume Serial . . . (If not cataloged)
Listing Data Set . . . SRCHFOR.LIST
Data Set Password . . . (If Search-For data set password protected)
Enter "/" to select option
Execution Mode
Output Mode
Command ==>
F1=Help F2=Split F3=Exit F7=Backward F8=Forward F9=Swap
F10=Actions F12=Cancel
-SDSF *SRCHFOR
```

The search string is the partial name of the queue, as it does not have any blanks or special characters it does not require quotes. The dataset name must be in quotes and the member specified as (*) to search every member in the PDS.

- o. The search command returns one member, so it should be easy to add this queue or correct the issue with its definition. Please make a note of this member name.

```

000001 1  ISRSUPC  -   MVS/PDF FILE/LINE/WORD/BYTE/SFOR COMPARE UTILITY- ISPF
000002  LINE-#  SOURCE SECTION                      SRCH DSN: ZQS1.SCSQPROC
000003
000004
000005 CSQ4INSS                      ----- STRING(S) FOUND -----
000006
000007      70  * SYSTEM.QSG.TRANSMIT.QUEUE is required to use intra-group que
000008      164 DEFINE QLOCAL( 'SYSTEM.QSG.TRANSMIT.QUEUE' ) +
000009
000010 1  ISRSUPC  -   MVS/PDF FILE/LINE/WORD/BYTE/SFOR COMPARE UTILITY- ISPF
000011  SEARCH-FOR SUMMARY SECTION                      SRCH DSN: ZQS1.SCSQPROC
000012
000013 LINES-FOUND LINES-PROC MEMBERS-W/LNS MEMBERS-WO/LNS COMPARE-COLS L
000014      2      23187      1      119      1:80

```

- p. Enter '=3.4' on the command line (no quotes) and use the enter key to navigate to the Dataset List Utility. On this panel enter the data set name level as *.SCSQPROC, please do not use quotes and once again use the enter key.

```

                                Data Set List Utility
                                More:
blank Display data set list      P Print data set list
  V Display VTOC information      PV Print VTOC information

Enter one or both of the parameters below:
Dsname Level . . . *.SCSQPROC
Volume serial . . .

Data set list options
Initial View                      Enter "/" to select option
 1 1. Volume                      / Confirm Data Set Delete
 2 2. Space                       / Confirm Member Delete
 3 3. Attrib                      / Include Additional Qualifiers
 4 4. Total                       / Display Catalog Name
                                   - Display Total Tracks
                                   - Prefix Dsname Level

```

- q. You will see the following warning, please just use the enter key again to get the list.

```

Catalog Search Warning

You have entered a high level qualifier
that will cause all catalogs on the system
to be searched. It will take a considerable
amount of time to complete this search.
If you wish to continue this search press
enter. If you wish to cancel the search,
enter END or CANCEL command.

Command ==> _____
F1=Help      F2=Split    F3=Exit      F9=Swap
F12=Cancel

```

- r. The list of datasets includes the base libraries for both the LTS and CD versions of MQ, as well as the libraries created for the individual queue managers. In this case we are going to edit the ZSQ1.SCSQPROC library. Please put an E in the Command column by the dataset name and use the enter key to bring up the list of members

```

Menu Options View Utilities Compilers Help
-----
DSLIST - Data Sets Matching *.SCSQPROC                               Row 1 of 5
Command - Enter "/" to select action                                Message      Volume
-----
      MQ93LTS.SCSQPROC                                           MQ1PR0
      MQ933CD.SCSQPROC                                           MQ1PR0
E      ZQS1.SCSQPROC                                             MQ1PD1
      ZQS2.SCSQPROC                                           MQ1P00
      ZQS3.SCSQPROC                                           MQ1P00
***** End of Data Set list *****

```

- s. Select the member containing the queue definition:


```
CSQ4BCPD
Command ==> s CSQ4INSS Scroll
F1=Help F2=Split F3=Exit F5=Rfind F7=Up F8=Down
```

- t. As this member is typically included in the queue manager CSQINP2 concatenation, it may be that there is an error in the queue definition. Find the SYSTEM.QSG.TRANSMIT queue definition using the Find command as shown:

```
EDIT          ZQS1.SCSQPROC(CSQ4INSS) - 01.00          Columns 00001
***** Top of Data *****
000001 *****
000002 *
000003 * IBM MQ for z/OS
000004 *
000005 * NAME: CSQ4INSS
000006 *
000007 * CSQINP2 sample for SYSTEM objects for queue-sharing groups
000008 *
000009 *****
000010 *
000011 * <copyright
000012 * notice="lm-source"
000013 * pids="5655-MQ9"
000014 * years="1993,2022"
000015 * crc="248478253" >
000016 * Licensed Materials - Property of IBM
Command ==> f SYSTEM.QSG.TRANSMIT Scroll ==>
```

- u. The first instance of the name is not the definition, but in the comments. Use the F5 key to search again.

```
EDIT          ZQS1.SCSQPROC(CSQ4INSS) - 01.00          CHARS 'SYSTEM.QSG.TRANSM
000069 * SYSTEM.QSG.CHANNEL.SYNCQ is required to use shared channels.
000070 * SYSTEM.QSG.TRANSMIT.QUEUE is required to use intra-group queueing.
000071 * SYSTEM.QSG.UR.RESOLUTION.QUEUE is required to use transactions
000072 * with a GROUP unit of recovery disposition - it must reside on
000073 * the CSQSYSAPPL CF structure.
```

After using the F5 key the queue definition should be displayed:

```

EDIT          ZQS1.SCSQPROC(CSQ4INSS) - 01.00          CHARS 'SYSTEM.QSG.T
000163
000164 DEFINE QLOCAL( 'SYSTEM.QSG.TRANSMIT.QUEUE' ) +
000165         QSGDISP( SHARED ) +
000166
000167 * Common queue attributes
000168         DESCR( 'System group transmission queue' ) +
000169         PUT( ENABLED ) +
000170         DEFPRTY( 5 ) +
000171         DEFPSIST( NO ) +
000172         CLUSTER( ' ' ) CLUSNL( ' ' ) +
000173
000174 * Local queue attributes
000175         GET( ENABLED ) +
000176         SHARE +
000177         DEFSOPT( SHARED ) +
000178         MSGDLVSQ( FIFO ) +
000179         RETINTVL( 999999999 ) +

```

- v. Other definitions from this member were accepted by the queue manager, so there must be an error/typo in this one queue. Use the F8 key to page forward, and the error is easy to spot- the CF structure declaration is incorrect. It still contains the ++ variable name for the CF structure. To fix this, a new member shall be created to contain the corrected definition and used as input to a batch update job known as CSQUTIL.

```

EDIT          ZQS1.SCSQPROC(CSQ4INSS) - 01.00          Columns 00001 00072
000180         MAXDEPTH( 999999999 ) +
000181         MAXMSGL( 64512 ) +
000182         NOHARDENBO +
000183         BOTHRESH( 0 ) +
000184         BOQNAME( ' ' ) +
000185         STGCLASS( ' ' ) +
000186         USAGE( XMITQ ) +
000187         INDXTYPE( CORRELID ) +
000188         CFSTRUCT( '++cfstructure++' ) +
000189         MONQ( OFF ) ACCTQ( OFF ) STATQ( OFF ) +
000190         STREAMQ( ' ' ) STRMQOS( BESTEF ) +

```

- w. Use the F7 key to page back to the beginning of the queue definition. On the 'Define QLOCAL' line, use 'cc' in the line number to indicate a copy of multiple

lines as shown.

```
EDIT          ZQS1.SCSQPROC(CSQ4INSS) - 01.00          Col
000163
cc0164 DEFINE QLOCAL( 'SYSTEM.QSG.TRANSMIT.QUEUE' ) +
000165         QSGDISP( SHARED ) +
000166
000167 * Common queue attributes
000168         DESCR( 'System group transmission queue' ) +
000169         PUT( ENABLED ) +
000170         DEFPRTY( 5 ) +
000171         DEFPSIST( NO ) +
000172         CLUSTER( ' ' ) CLUSNL( ' ' ) +
000173
000174 * Local queue attributes
000175         GET( ENABLED ) +
000176         SHARE +
000177         DEFSOPT( SHARED ) +
000178         MSGDLVSQ( FIFO ) +
000179         RETINTVL( 999999999 ) +
```

- x. Page forward until the last line of the queue definition is shown (usually 2 F8 keystrokes), enter 'cc' in the line number and the command 'create QSGDEF' as shown. Use the enter key to complete the command.

```

EDIT          ZQS1.SCSQPROC(CSQ4INSS) - 01.00          Block command in
000197          QDEPTHLO( 40 ) +
000198          QSVCI EV( NONE ) +
000199          QSVCI NT( 999999999 ) +
000200
000201 * Trigger attributes
000202          NOTRIGGER +
000203          TRIGTYPE( NONE ) +
000204          TRIGPRI( 0 ) +
000205          TRIGDPH( 1 ) +
000206          TRIGDATA( ' ' ) +
000207          PROCESS( ' ' ) +
000208          INITQ( ' ' )
cc0209
000210 *****
000211
000212 DEFINE QLOCAL( 'SYSTEM.QSG.UR.RESOLUTION.QUEUE' ) +
000213          QSGDISP( SHARED ) +
Command ==> create QSGDEF          Scroll =

```

Member QSGDEF created

- y. You should see
- z. Use F3 to return to the member list of ZQS1.SCSQPROC and select QSGDEF using 'S qsgdef' on the command line and use the enter key.

```

_____ CSQ4IVPX
_____ CSQ4LFMT
_____ CSQ4LOGJ
Command ==> s qsgdef

```

- aa. Change the structure variable to TEST2, as this application CF structure is defined in this Sysplex.

```

000029 * Event control attributes
000030          QDPMAXEV( ENABLED ) +
000031          QDPHIEV( DISABLED ) +
Command ==> c ++cfstructure++ TEST2 all

```

- bb. Once that is changed, save the member and return to the member list. This can be done in one command 'save;end' where the semi-colon is the delimiter for commands in this environment.

```
==CHG>          CFSTRUCT( 'TEST2' ) +  
000026          MONQ( OFF ) ACCTQ( OFF ) STATQ( OFF ) +  
000027          STREAMQ( ' ' ) STRMQOS( BESTEF ) +  
000028  
000029 * Event control attributes  
000030          QDPMAXEV( ENABLED ) +  
000031          QDPHIEV( DISABLED ) +  
Command ==> save;end
```

- cc. The next step is to create a job using CSQUTIL to add this repaired definition and to backup the CF Structures. Start by selecting member CSQ4IVPX, copy the whole member and create member FIXZQS1.

```
EDIT          ZQS1.SCSQPROC(CSQ4IVPX) - 01.00          Co1  
***** Top of Data *****  
c99999 //CSQ4IVPX JOB  
000002 //*****  
000003 //*  
000004 //* <copyright  
000005 //* notice="lm-source"  
000006 //* pids="5655-MQ9"  
000007 //* years="1993,2016"  
000008 //* crc="2112476321" >  
000009 //* Licensed Materials - Property of IBM  
000010 //*  
000011 //* 5655-MQ9  
000012 //*  
000013 //* (C) Copyright IBM Corp. 1993, 2016 All Rights Reserved  
000014 //* </copyright>  
000015 //*  
000016 //*****  
Command ==> create FIXZQS1
```

dd. End the edit session by entering 'end' on the command line. At the member list, use the command 'Refresh' to refresh the list of members. Then use the SORT CHANGED command to bring the changed members to the top. It should look something like the image below. Note that FIXZSQ1 should be first and QSGDEF should be second.

EDIT	ZQS1.SCSQPROC				Member FIXZSQ1 saved		
	Name	Prompt	Size	Created	Changed	ID	
_____	FIXZSQ1	*Edited	68	2024/02/26	2024/02/26 18:49:10	USER1	
_____	QSGDEF		46	2024/02/26	2024/02/26 18:17:35	USER1	
_____	CFRMSHOW		8	2024/01/29	2024/01/29 17:17:47	DQUINCY	
_____	CSQ4ZPRM		203	2024/01/28	2024/01/29 12:28:05	DQUINCY	
_____	CSQ45AQS		78	2024/01/26	2024/01/26 18:01:14	DQUINCY	
_____	CSQ45AQM		81	2024/01/26	2024/01/26 17:52:28	DQUINCY	
_____	TESTDISP		11	2024/01/26	2024/01/26 17:47:44	ELKINSC	

ee. Select the FIXZSQ1 member to edit it. The first thing to change is the job name, this does not have to be done, but can make it a bit simpler to find in the output.

```
000001 //ZSQ1FIX JOB
000002 //*****
000003 //*
```

ff. Page forward (use F8) until you get to the first ++ variable. Enter the commands below to start changing the variables for the execution of CSQUTIL.

```

EDIT          ZQS1.SCSQPROC (FIXZSQ1) - 01.01          Columns 00001 00072
000035 /***   Replace  ++THLQUAL++
000036 /***                                     with the high level qualifier of the
000037 /***                                     IBM MQ target library data sets.
000038 /***
000039 /***   Replace  ++LANGLETTER++
000040 /***                                     with the letter for the language that
000041 /***                                     you want messages shown in.
000042 /***
000043 /***   Replace  ++OUTCLASS++
000044 /***                                     with the output class you wish to direct
000045 /***                                     the procedures output to.
000046 /***
000047 /***   Replace  ++NAME++
000048 /***                                     with the name of your queue manager.
000049 /***                                     If the value is changed to blank then
000050 /***                                     an attempt will be made to connect to
000051 /***                                     the queue manager specified in CSQBDEFV.
Command ==> c '++THLQUAL++' 'MQ933CD' all          Scroll ==> CSR

```

i. Commands:

c '++THLQUAL++' 'MQ933CD' all

c '++LANGLETTER++' 'E' all

c '++OUTCLASS++' '*' all

c '++NAME++' ZQS1 all

Save the member after these changes have been made

gg. Page forward until you find CSQUCMD DD statement. It will probably be around line 63 and looks like this -

//CSQUCMD DD * line

hh. Change this line to a real data set input, to pull in the QSGDEF member. To do this, first delete the current input lines that are directives to the CHIN:

```

START CHINIT
DISPLAY CHINIT
STOP CHINIT

```

Use a D in the line number to delete them individually.

ii. Now please alter the statement to look like the DD statement below – this tells CSQUTIL where to get the commands for the queue manager. Then save the member and end. DO NOT SUBMIT IT YET. Please note that the DSN should be ZQS1.SCSQPROC(QSGDEF)

```

000062 /*
000063 //CSQUCMD DD DISP=SHR,DSN=ZSQ1.SCSQPROC(QSGDEF)
000064 /*
000065 //

```

- jj. Back on the member list, select member BKUPCFST – we will be creating this new member to contain the BACKUP CFSTRUCT command needed. This one line member looks like this:

```

EDIT      ZQS1.SCSQPROC(BKUPCFST) - 01.00      Columns 00001 00072
***** ***** Top of Data *****
==MSG> -Warning- The UNDO command is not available until you change
==MSG>          your edit profile using the command RECOVERY ON.
..... BACKUP CFSTRUCT(*)
.....

```

Save the member and end to return to the list of members.

- kk. Select FIXZSQ1 again and add this new member to the concatenation for input to CSQUTIL.

```

000063 //CSQUCMD DD DISP=SHR,DSN=ZQS1.SCSQPROC(QSGDEF)
000064 //          DD DISP=SHR,DSN=ZQS1.SCSQPROC(BKUPCFST)
000065 /*

```

- ll. Save and submit the member by using the 'save;submit' command stack on the command line.

```

000064 /*
Command ==> save;submit

```

- mm. From the switchbar, put the cursor on SDSF and use the enter key. Use F3 to return to the options list (there may be multiple hits needed) and select ST


```

SDSF MENU 3.1      MQPLEX1  MQS1
NP   NAME      Description      Group      Status
    DA        Active users      Jobs
    I         Input queue       Jobs
    O         Output queue      Output
    H         Held output queue Output
    ST        Status of jobs    Jobs
    JG        Job groups        JES
    SYM       System symbols    System
    LOG       System log        Log
    SR        System requests   Log
    MAS       Members in the MAS JES
    JC        Job classes       JES
    SE        Scheduling environments WLM
    RES       WLM resources     WLM
    ENC       Enclaves          WLM
    PS        Processes         OMVS
    SYS       System information System
COMMAND INPUT ==> st

```

nn. Find the ZSQ1FIX job and expand the output with a ?

```

      ZQS1MSTR STC08489 SYSPROG      1 PRINT      327
?     ZSQ1FIX  JOB08501 USER1        1 PRINT      A  329

```

oo. Select the SYSPRINT member to review the changes to the queue manager.

Warning: When using CSQUTIL the return code will be zero, even if commands have failed. It is critical to review the SYSPRINT output to make sure the changes took effect.

	Display	Filter	View	Print	Options	Search	Help	
SDSF	JOB DATA SET	DISPLAY - JOB	ZSQ1FIX	(JOB08501)	LINE 1-4 (4)			
NP	DDNAME	StepName	ProcStep	DSID	Owner	C	Dest	Rec-Cnt Page
	JESMSG LG	JES2		2	USER1	S	LOCAL	16
	JESJCL	JES2		3	USER1	S	LOCAL	63
	JESYSMSG	JES2		4	USER1	S	LOCAL	61
S	SYS PRINT	IVPX		102	USER1	S	LOCAL	61

pp. Note that the information about the execution is at the top of the SYS PRINT file:

```
CSQU000I CSQUTIL IBM MQ for z/OS V9.3.3
CSQU001I CSQUTIL Queue Manager Utility - 2024-02-26 19:55:47
COMMAND
CSQU127I Executing COMMAND using input from CSQUCMD data set
CSQU120I Connecting to ZQS1
CSQU121I Connected to queue manager ZQS1
CSQU055I Target queue manager is ZQS1
DEFINE QLOCAL( 'SYSTEM.QSG.TRANSMIT.QUEUE' ) +
        QSGDISP( SHARED ) +
* Common queue attributes
        DESCR( 'System group transmission queue' ) +
```

qq. Page forward (F8) until the last attribute of the queue being added is shown and the reason and return codes are displayed. They should both be zero.

```
* Trigger attributes
        NOTRIGGER +
        TRIGTYPE( NONE ) +
        TRIGMPRI( 0 ) +
        TRIGDPH( 1 ) +
        TRIGDATA( ' ' ) +
        PROCESS( ' ' ) +
        INITQ( ' ' )
CSQN205I COUNT= 2, RETURN=00000000, REASON=00000000
CSQ9022I ZQS1 CSQMAQLC ' DEFINE QLOCAL ' NORMAL COMPLETION
```

rr. Page forward again to see the output from the BACKUP CFSTRUCT command. It should look like this:

```
BACKUP CFSTRUCT(*)
CSQN205I  COUNT=          5, RETURN=00000000, REASON=00000000
CSQE105I ZQS1 CSQELRBK BACKUP task initiated for structure CSQSYSAPPL
CSQE105I ZQS1 CSQELRBK BACKUP task initiated for structure TEST1
CSQE105I ZQS1 CSQELRBK BACKUP task initiated for structure TEST2
CSQ9022I ZQS1 CSQELRBK ' BACKUP CFSTRUCT' NORMAL COMPLETION
CSQU057I  2 commands read
CSQU058I  2 commands issued and responses received, 0 failed
CSQU143I  1 COMMAND statements attempted
CSQU144I  1 statements executed successfully
CSQU148I CSQUTIL Utility completed, return code=0
```

Congratulations! You have successfully de-bugged and fixed problems associated with an almost brand-new Queue Manager.