S12434 - WMQ - Introduction to Dump Reading - Hands-on Lab

SHARE Lab – Introduction to Dump and Dump reading for MQ

Dumps

- Taken when MQ detects an error
- Taken by z/OS DUMP command
- Snapshot of QMGR at a point in time
- Dump formatter to extract useful information
- Valuable to service

Basic information for the Lab:

Dump location : TEAMXX.DUMP.SHARE
Type "IPCS" to access the online facility to read dumps.
All dumps need selecting before you can run commands which you do from option "0"

```
---------------------- IPCS Default Values ----------------------------
Command ===>

  You may change any of the defaults listed below.  The defaults shown before
  any changes are LOCAL.  Change scope to GLOBAL to display global defaults.

  Scope   ==> LOCAL    (LOCAL, GLOBAL, or BOTH)

  If you change the Source default, IPCS will display the current default
  Address Space for the new source and will ignore any data entered in
  the Address Space field.

  Source   ==> DSNAME('TEAMXX.DUMP.SHARE')
  Address Space   ==>
  Message Routing ==> NOPRINT TERMINAL NOPDS
  Message Control ==> CONFIRM VERIFY FLAG(WARNING)
  Display Content ==> NOMACHINE REMARK REQUEST NOSTORAGE SYMBOL

Press ENTER to update defaults.

Use the END command to exit without an update.
```

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Task 1 – How do I know what ASIDs are in the DUMP.
1. Use option 6 "commands" and issue command IP CBF RTCT.
2. This command will form out which ASIDs have been included in the DUMP.
3. Note the numbers in the SDAS column as these are the ASIDs.
4. Then use the command IP SELECT ALL.
5. You can now map the ASID to the JOBNAM.

Task 2 – How do I look at a snapshot of the SYSLOG.
1. Use option 6 "commands" and issue command VERBX MTRACE.
2. This shows you a small snapshot of the SYSLOG up until the time of the DUMP.

Task 3 – How to determine if I have a PTF applied.
1. Use option 6 "commands" from the IPCS main menu and run the MQ formatted. You need to have the SCSQAUTH dataset allocated in your ISPLLIB for your ISPF session. This has been done for you with the Lab.
2. Issue the command VERBX CSQWDPRD 'SUBSYS=QML1,PTF=Y'
3. Look at a specific PTF from IBM Support we know that module CSQ9SCNA was modified by PTF UK77895.
4. Now can you determine if PTF UK77895 has been applied to this running QMGR.
5. Look around at the rest of the Modules to understand how much information you can see.
6. Has PTFs UK88866 been applied?

Task4 – How to determine how many messages on CLUSTER queues at time of dump
1. Issue the command VERBX CSQWDPRD 'SUBSYS=QML1,DMC=3,ONAM=SYSTEM.CLUSTER'
2. Scroll until you find the Queue information (or "find MQLO" which is our internal speak for MQ Local Object).
3. Look at the queue information, you can see the PSID being used, the curdepth and the priority of the messages.
4. Look around at the rest of the information available. Notice that there are messages on the queue we format out extra information for each message.

Task 5 – How can I see "internal" trace.
1. Issue the command VERBX CSQWDPRD 'SUBSYS=QML1,TT'
2. Whilst the trace here is normally for IBM Support, there are some things that are useful for you.
3. Here are some useful things to search for : CSQMOPEN / CSQMPUT / CSQMGET
4. Look at the trace entry follow the EXIT call for the API which should be CSQMPRH2, you will see the formatted MQRC so you can see if it worked or not.

Task 3 – Answer

```
CSQ9PARS   9353F000   0001C000
    CSQ9SCNA   9353F100   00014D38   20120412   UK77895
    CSQ9SCN3   93553E38   000011D0   20120412   UK77895
    CSQ9SCNC   93555008   00000F00   20111013   12.29GA
    CSQ9SCNX   93555F08   00000DA0   20111013   12.40GA
    CSQ9SCN0   93556CA8   00001050   20111013   12.18GA
    CSQ9SCN1   93557CF8   000009F0   20111013   12.25GA
    CSQ9SCN2   935586E8   00000650   20111013   12.23GA
    CSQ9SCN4   93558D38   000022C8   20111013   12.50GA
```

UK88866 has not been applied

Task 4 – Answer

```
Local Queue Objects, Private
----------------------------
MQLO=0000000072161368 : SYSTEM.CLUSTER.COMMAND.QUEUE
IVSA=721617F8 : Msgs on PSID=0001    (STGCLASS=SYSTEM  ) : QSGDISP=QMGR
DMCPTR=00000403 : CURDEPTH=00000000 : IVSH=721616D8 : INDXTYPE=NONE
ALTDATE/ALTTIME=2012-09-07/11:45:29
MQLO=000000007215F528 : SYSTEM.CLUSTER.TRANSMIT.QUEUE
IVSA=7215F9B8 : Msgs on PSID=0003    (STGCLASS=REMOTE  ) : QSGDISP=QMGR
DMCPTR=00000602 : CURDEPTH=00000000 : IVSH=7215F898 : INDXTYPE=CORRELID
ALTDATE/ALTTIME=2012-09-07/11:45:29
MQLO=000000007215FB78 : SYSTEM.CLUSTER.REPOSITORY.QUEUE
IVSA=721611A8 : Msgs on PSID=0001    (STGCLASS=SYSTEM  ) : QSGDISP=QMGR
DMCPTR=00000601 : CURDEPTH=00000066 : IVSH=7215FEE8 : INDXTYPE=CORRELID
```

Task 5 – Answer

```
CSQMGET -00 EB=10EAB580 CALLEXIT RET=939C9254 16:13:36.7843488 MMC  RMID=D4
                  5A031418 7EBCB28C 00007FFA 00000000 00000002 0000000
CSQMPRH2-45 EB=10EAB580 RMEXIT   RET=00000000 16:13:36.7843490 MMC  RMID=D4
                  00000000 000007F1
                  MQCC_OK        MQRC_NO_MSG_AVAILABLE
```