**Abstract:**

This tool provides a simple method to gauge a CICS (Customer Information Control System) system’s performance in terms of the response times of online transactions.

With this simple tool, you don’t have to count on ***OMEGA Monitor for CICS*** to generate CICS online transaction response times for you.

This tool runs on a z/OS, normally in TSO, invoked by a JCL (Job Control Language) to read an SMF file or files, where CICS transaction related information records are kept. More specifically, SMF type 110 records are processed by this tool to produce CICS transaction response times.

To have your CICS generated these needed SMF records, the CICS **Monitoring Control Table** should be properly configured first. Simply put, specifying “**DFHTASK**” to the **Monitoring Control Table**: “**DFHMCTxx**” will let CICS produce SMF type 110 records for you.

**Author:**

Andrew Jan

**Requirements:**

This tool is for CICS (Customer Information Control System) Transaction Server for z/OS version 3.1 and above

The CICS has to be configured to activate the data collection on tasks (by specifying “**DFHTASK**” to the CICS Monitoring Control Table “**DFHMCTxx**”. So the SMF (System Management Facility) Type 110 records whose Subtype are “1” are having the information that is needed to produce the response time figures.

Please have a look at the attached file: “***Sample\_CICS\_Monitoring\_Control\_Table.txt*** ” for how to specify the DFHMCT macro for collecting the online transaction performance to SMF.

There are six subtypes -- 0, 1, 2, 3, 4, 5 – of SMF Type 110 records, they represent different types of information:

‘0’ for journaling

‘1’ for monitoring

‘2’ for statistics

‘3’ for TS data sharing

‘4’ for CFDT server statistics

‘5’ for named ctr server

In our case, we need only Type ‘1’ records for calculating the CICS online transaction response times.

Please also refer to the CICS’s Manual: “Configuring CICS” through the following link:

<https://www.ibm.com/support/knowledgecenter/en/SSGMCP_5.5.0/documentation/PDF.html.>

**Explanation of the Purpose:**

CICS customers normally purchase a S/W product: ***OMEGA Monitor for CICS*** to produce online transactions’ response times. Some customers however, don’t have ***OMEGA Monitor for CICS***, so they don’t have an effective measure on their daily online transactions’ performance in terms of transactions’ response times.

We have a customer who don’t have ***OMEGA Monitor for CICS***. When we were migrating their CICS system from their local center to the IBM’s **zCloud** environment in Taiwan, without having the **OMEGA** Monitor tool, we did not have a ready tool to provide the customer with solid evidence that the performance of their CICS online transaction did improve a lot.

That was the trigger for me to develop this tool.

**How to run?**

1. Upload the file: “***CICSRESP.bin*** ” in Binary Mode to z/OS as a 80-column PDS (Partitioned Data Set) member, then update the input DD card as the SMF files of yours; or
2. Compile the program from source code: *“****CICSRESP.asm*** *”* to generate an object file, then add the following JCL statement on top of the 80-Column Object file:

**//ANDREWJA JOB IBM,SP,CLASS=A,MSGCLASS=X,NOTIFY=&SYSUID**

**//\***

**//STEP01 EXEC PGM=IFASMFDP**

**//INDD1 DD DISP=SHR,DSN=SYS1.SMFBKUP........**

**//OUTDD1 DD DISP=(NEW,PASS),DSN=&&TEMP,SPACE=(CYL,(50,50)),**

**// UNIT=SYSDA**

**//SYSPRINT DD SYSOUT=\***

**//SYSIN DD \***

**INDD(INDD1,OPTIONS(DUMP)) OUTDD(OUTDD1,TYPE(110(1)))**

**DATE(2023305,2023305)**

**START(1330)**

**END(1430)**

**/\***

**//\***

**//STEP02 EXEC PGM=LOADER,REGION=0M**

**//SYSPRINT DD SYSOUT=\***

**//INPUT DD DSN=&&TEMP,DISP=(OLD,DELETE)**

**//OUPUT DD SYSOUT=\*,LRECL=80**

**//SYSLIN DD \***

Specify your SMF data sets – **SYS1.SMFBKUP........**above – to the DD name: ‘**INDD1**’.

Note that we specify “**TYPE(110(1))**” – **Subtype 1 of Type 110** -- above to narrow down the scope of SMF records..

Also note that we use the program: ‘**PGM=LOADER**’ in Step 2. By using ‘**LOADER**’, we don’t have to generate an LMD (Loaded Module) version of this tool. The 80-Column Object code, instead of an LMD, can be directly invoked through ‘**LOADER**’. The 80-Column Object version is much easier to circulated through downloads (to a PC) and uploads (to the mainframe) in binary mode.

Please see the attached file: “***Sample\_JCL\_CICSRESP.jcl*** ” for a reference.

1. The result is something like: “***Sample\_Result\_of\_Running\_This\_Tool.zip*** ”

**Maintenance:**

The source code of this tools is an attached file: “***CICSRESP.asm*** ”. It was written in Assembler to fit into the requirement of using the related macro APIs provided by CICS.

Please update the output DD card at the bottom of this file as your 80-column object data set and member name:

“**//C.SYSLIN DD DISP=SHR,DSN=ANDREWJ.SOURCE.JCL(CICSRESP)**”

Also remember that the source code should be compiled against the CICS’s standard macro library: CICSxxx.xxxxx.DFHMAC. Two members in this macro library: “**DFHMNRDS**” and “**DFHSMFDS**” are needed for compiling the source code of this program. Sample DFHMAC data set which contains these two member is attached as: “ ***Sample\_Standard\_CICS\_Macros\_in\_DFHMAC\_Needed.zip*** ”.