Combining GTF trace of CICS and Component Trace of System SSL

Scenario
IBM Service have asked you for GTF tracing of CICS and also for tracing of System SSL. You wish to examine these together in the same IPCS report.

GTF Trace of CICS
In CICS, activate System Trace and GTF trace using CETR. Make sure that appropriate trace flags are set.

<table>
<thead>
<tr>
<th>Item</th>
<th>Choice</th>
<th>Possible choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Trace Status</td>
<td>STOPPED</td>
<td>STArted, STOpped</td>
</tr>
<tr>
<td>Internal Trace Table Size</td>
<td>4096 K</td>
<td>16K - 1048576K</td>
</tr>
<tr>
<td>Auxiliary Trace Status</td>
<td>STARTED</td>
<td>STArted, STOpped, Paused</td>
</tr>
<tr>
<td>Auxiliary Trace Dataset</td>
<td>A</td>
<td>A, B</td>
</tr>
<tr>
<td>Auxiliary Switch Status</td>
<td>ALL</td>
<td>NO, NExt, All</td>
</tr>
<tr>
<td>GTF Trace Status</td>
<td>STARTED</td>
<td>STArted, STOpped</td>
</tr>
<tr>
<td>Master System Trace Flag</td>
<td>ON</td>
<td>ON, Off</td>
</tr>
<tr>
<td>Master User Trace Flag</td>
<td>ON</td>
<td>ON, Off</td>
</tr>
</tbody>
</table>

When finished, press ENTER.

PF1=Help  3=Quit  4=Components  5=Ter/Trn  9=Error List

Start the GTF trace task. In this case, we use a name of CICSGTF and pass in a variable to set the dataset name. The GTF task can be found in SYS1.PROCLIB.

\texttt{S GTF.CICSGTF, ID=CICSGTF}

The GTF task issues a WTOR to allow you to specify options.

\texttt{R 866, TRACE=USRP, SYS, DSP, JOBNAMEP}

Another WTOR appears.

\texttt{R 867, USR=(F6C, F44), JOBNAME=JOA0W052, END}

F6C is CICS. F44 is RACF. The Jobname refers to my CICS region, which is a CICSPlex SM WUI Server.

A final WTOR is issued, to which we reply U to indicate that we have completed.

\texttt{R 868, U}

GTF trace is now running.
Component Trace of System SSL

System SSL does not support GTF trace, but instead requires component tracing. This is detailed in “z/OS Cryptographic Services System Secure Sockets Layer Programming”, chapters 11 and 12.


IBM Technote “How to capture and format SSL component trace” will also prove useful.


You need to activate the GSKSRVR started task. The started task will need appropriate RACF configuration in class STARTED.

A sample can be found in hlq.SGSKSAMP(GSKSRVR).

You need to create a CTRACE writer. This must either be a PROC in SYS1.PROCLIB (the JES concatenation DOES NOT WORK, it MUST be SYS1.PROCLIB), or a JOB in the JOBLIST in SYS1.PARMLIB. “The trace writer proc (GSKWTR) must be stored in a system PROCLIB. This is not the same as a JES2 or JES3 PROCLIB. Trace writers must be in a dataset that is part of the IEFPSI PROCLIBs in MSTJCL00”. If not, the job will not start/run, and you will NOT see it in the Held Output Queue. You will see messages in the System Log that the PROC could not be found.

A sample can be found in hlq.SGSKSAMP(GSKWTR).

Having done that, issue the following command to activate Component Trace, assuming you have sufficient RACF authority to do so.

TRACE CT,ON,COMP=GSKSRVR

A WTOR appears.

RN, JOBNAME=(JOA0W052), OPTIONS=(LEVEL=255), WTR=GSKWTR, END

The GSKWTR task will now be visible.

Perform the testing

In this case, I logged on to my CICSPlex SM Web User Interface server using a browser and SSL.

Stop the traces

Issue the following command to stop GTF tracing. We called the GTF trace job CICSGTF, so we need to issue STOP to stop it.

P CICSGTF

Issue the following commands to deactivate component trace and to stop the CTRACE writer.

TRACE CT, OFF, COMP=GSKSRVR
TRACE CT, WTRSTOP=GSKWTR

Start IPCS

Enter the following IPCS commands from option 6.

MERGE
IPCS prompts you to enter commands, or to type MERGEEND.

**CTRACE COMP (GSKSRVR) FULL DSN('CTSSVT.GSKWTR.TRACE01') LOCAL**

GTF trace assumes local time, so specify local time for CTRACE as well. Use the trace files from the GSKWTR task. You may issue as many of these as you have trace files.

**CTRACE COMP (GSKSRVR) FULL DSN('CTSSVT.GSKWTR.TRACE02') LOCAL**

**CTRACE COMP (GSKSRVR) FULL DSN('CTSSVT.GSKWTR.TRACE03') LOCAL**

**CTRACE COMP (GSKSRVR) FULL DSN('CTSSVT.GSKWTR.TRACE04') LOCAL**

**CTRACE COMP (GSKSRVR) FULL DSN('CTSSVT.GSKWTR.TRACE05') LOCAL**

**CTRACE COMP (GSKSRVR) FULL DSN('CTSSVT.GSKWTR.TRACE06') LOCAL**

**CTRACE COMP (GSKSRVR) FULL DSN('CTSSVT.GSKWTR.TRACE01') LOCAL**

Issue the GTFTRACE with the USR(ALL) flag to format CICS trace in GTF trace. Use the dataset from the GTF task.

**GTFTPTRACE DSN('CICSGTF.GTF.TRACE') USR(ALL)**

Enter MERGEEND to get the final report.

**MERGEEND**