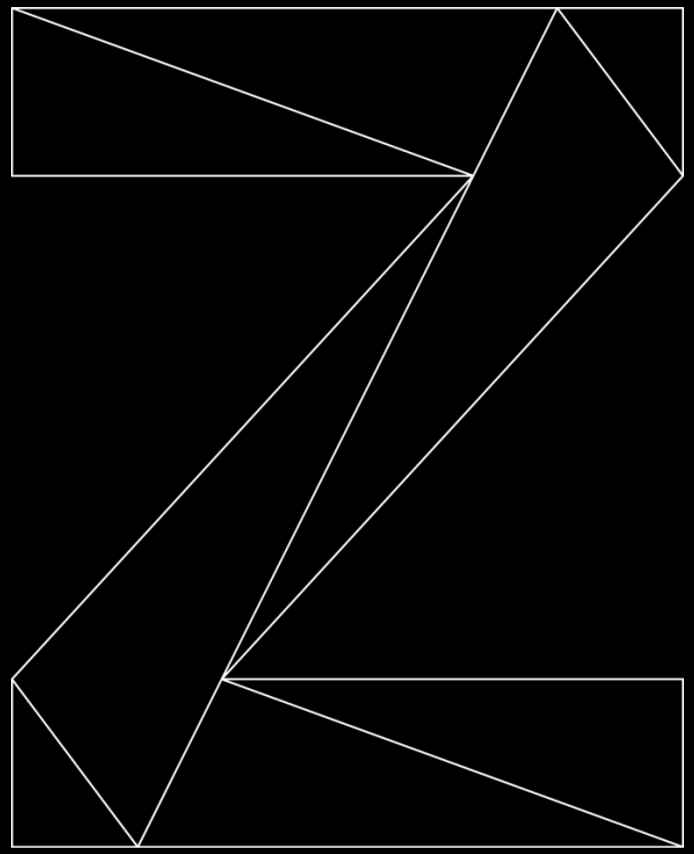
CICS Nuts, Bolts and Gotchas

Andre Clark
Advisory Software Engineer
CICS/TS Level 2 Support



THREADSAFE FILE CONTROL COMMANDS (DATATABLES)

QUESTION: I WANT TO KNOW IF DATA TABLE(NON-SHARED) READS ARE THREADSAFE OR NOT. AS WE DO SEE DT MAKING A SWITCH TO QR WHEN COMPARED TO NORMAL VSAM FILES USING LSRS.

ANSWER: REQUESTS OUT TO DATATABLES ARE NOT THREADSAFE. YOU WILL ALWAYS SWITCH TO THE QR FOR A DATATABLE REQUEST. THREADSAFE FILE CONTROL BENEFITS CICS REGIONS WHERE THE FILES ARE DEFINED AS LOCAL TO THE CICS REGION AND ARE EITHER VSAM LSR OR RLS. WITH LSR OR RLS FILES, AND THE SETTING OF THE FCQRONLY SIT PARM TO SPECIFY NO, FILE CONTROL COMMANDS FOR LOCAL VSAM LSR OR RLS FILES CAN RUN ON AN L8 OR L9 TCB.

- THREADSAFE FILE CONTROL APPLICATIONS

AFCG ABENDS ON RLS FILES

- AFTER MIGRATING FILE FROM NON-RLS TO RLS ACCESS MODE, AFCG ABENDS MAY OCCUR IF A TRANSACTION ISSUES A SEQUENCE OF FILE CONTROL REQUESTS THAT WOULD CAUSE THE FILE TO DEADLOCK ITSELF. THE VSAM RLS AND PREPARING FOR RLS ACCESS SECTIONS OF THE IBM DOCUMENTATION FOR CICS TALKS ABOUT THIS IN A BIT MORE DETAIL

- IF A FILE IS BEING ACCESSED IN NON-RLS MODE, AN AFCG ABEND IS CAUSED BY A TRANSACTION MAKING CONFLICTING REQUESTS AGAINST THE SAME CONTROL INTERVAL (CI).IF A FILE IS ACCESSED IN LSR MODE, A SELF DEADLOCK MIGHT ARISE IF THE TRANSACTION ISSUES A DELETE REQUEST ON A RECORD IN THE CI THAT WAS ALSO THE SUBJECT OF A READ UPDATE REQUEST ISSUED BY THE SAME TRANSACTION. IF CILOCK=NO IS IN EFFECT (SPECIFIES THAT THE CONTROL INTERVAL IS TO BE FREED) THE AFCG ABEND WOULD NOT BE RETURNED AS NO SELF-DEADLOCK CONDITION OCCURS ON THE DELETE REQUEST

- CILOCK IS NOT RELEVANT FOR RLS, SO AFTER THE FILES ARE MIGRATED TO RLS ACCESS MODE, AN AFCG WOULD OCCUR.

- FEATURE TOGGLE COM.IBM.CICS.RLS.DELETE.RIDFLD WAS ADDED (VIA APAR PH07596) TO PROVIDE THE ABILITY FOR CICS TO MATCH THE BEHAVIOR OF LOCAL VSAM WITH SIT PARM CILOCK=NO WHEN ISSUING AN EXEC CICS READ UPDATE RIDFLD FOLLOWED BY AN EXEC CICS DELETE RIDFLD ON FILE ACCESSED IN RLS MODE.

- APAR PH07596
  - R540 PTF UI65672
  - R550 PTF UI65671

AFTER UPGRADING TO CICS TS 5.6 SOME REGIONS CRASH WITH ABEND878 SHORT OF Z/OS 24-BIT STORAGE OR MEMTERM

- YOU MAY SEE THIS REPORTED IN A MESSAGES LIKE:
  - DFHXS0001 AN ABEND (CODE 878/AKEX) HAS OCCURRED AT OFFSET X'FFFF' IN MODULE DFHXSAD.
  - DFHAP0001 AN ABEND (CODE 878/AKEB) HAS OCCURRED AT OFFSET X'FFFF' IN MODULE DFHD2EX1 .
  - DFHDS0001 AN ABEND (CODE 878/AKEB) HAS OCCURRED AT OFFSET X'FFFF' IN MODULE DFHDSTCB
- DUMPS TYPICALLY SHOW THERE HAS BEEN A GROWTH IN HIGH PRIVATE STORAGE BELOW THE LINE, MAKING THE LSQA BOTTOM ADDRESS LOWER THAN IS TYPICAL. BECAUSE OF THIS LOW LSQA BOTTOM ADDRESS THE AMOUNT OF FREE STORAGE AVAILABLE TO THE USER PRIVATE AREA IS SMALLER AND CAN LEAD TO 878 ABENDS.
- YOU MAY ALSO NOTICE NEW MESSAGES BEING ISSUED BY THE NEW MVS STORAGE MONITORING- REPORTING A DECREASE IN 24 BIT STORAGE
  - DFHSM0144W THE CICS REGION IS SHORT ON 24-BIT MVS UNALLOCATED STORAGE.
  - DFHSM0148I 24-BIT MVS UNALLOCATED STORAGE: TOTAL XK, LARGEST CONTIGUOUS AREA XK.
- CICS 5.6 CUSTOMERS WHO ARE EXPERIENCING ABEND878 SITUATIONS WHILE RUNNING HIGH VOLUMES OF THREADSAFE APPLICATIONS SHOULD INSTALL THE PTFS FOR Z/OS APAR OA63457.
  - R7C0 2.4 UJ08959
  - R7D0 2.5 UJ08960

DFHEIENT DOES NOT RESTORE REGISTER 1 WHEN IN AMODE64 (APAR PH31178)

- IN AMODE 64 THE DFHEIENT MACRO DOES NOT RESTORE REGISTER 1 AS IT COMPLETES.
- ANY OPTIONAL PARAMETERS PASSED BY THE CALLING PROGRAM ARE NOT ACCESSIBLE VIA THE ADDRESS THAT IS HELD IN REGISTER 1.
- WITH THE INTRODUCTION OF AMODE 64 THE DFHEIENT MACRO WAS UPDATED TO SUPPORT 64-BIT, BUT IT DID NOT RESTORE REGISTER 1 TO THE VALUE THAT IT SAVED ON ENTRY.
- AFTER DFHEIENT COMPLETES REGISTER 1 DOES NOT HOLD AN ADDRESS POINTING TO THE EIB AND COMMAREA, PLUS ANY OPTIONAL PARAMETERS THAT MAY HAVE BEEN PASSED TO THE PROGRAM, AS EXPECTED AND AS ALREADY HAPPENS WITH AMODE 24 AND AMODE 31.

- FIXING PTF:
  - RELEASE 540: UI75405
  - RELEASE 550: UI75404
  - RELEASE 560: UI75403

CICS SYSTEM DUMP MISSING PERTINENT STORAGE

- THERE IS A KNOWN PROBLEM WHERE THERE IS A CICS SYSTEM DUMP TAKEN THAT APPEARS TO BE A COMPLETE DUMP, BUT VARIOUS DOMAINS ARE UNABLE TO FORMATTED OUT VIA IPCS
- THE SDUMP WAS TAKEN WITH THE SDUMP OPTIMIZE OPTION SET TO YES
- IN THE DUMP YOU MAY SEE DFHPD0103 MESSAGES LIKE THE FOLLOWING:

```
** DFHPD0103  CPE ADDRESS 00000050_42319CC8 IS INVALID.
** DFHPD0103  APE ADDRESS 00000050_424021D0 IS INVALID.
```

- MVS APAR OA64083 ADDRESSES THIS PROBLEM
  - AS OF YET THERE IS NO PTF AVAILABLE (APAR IS STILL OPEN)
  - THE WORKAROUND IS TO DISABLE SDUMP OPTIMIZATION (SET IT TO NO, WHICH IS THE DEFAULT)

HIPER AND PE APARS

- YOU WANT TO FIND ALL HIGH IMPACT (HIPER) OR PROGRAMMING ERROR (PE) APARS FOR A SPECIFIC RELEASE OF CICS TRANSACTION SERVER (CICS TS), CICS/VSE, CICSPLEX SM, OR THE CICS SERVICE FLOW FEATURE. THE HIPER OR PE APARS FOR CICS PRODUCTS(79433) PAGE CONTAINS DIRECTIONS ON HOW TO QUICKLY FIND THIS INFORMATION.

- THIS PAGE CONTAINS DIRECT POINTERS TO THE PAGES FOR HIPER / PE APARS FOR SPECIFIC RELEASES:
  - CICS TS 5.6 HIPER APARS
  - CICS TS 5.6 PE APARS
  - CICS TS 5.5 HIPER APARS
  - CICS TS 5.5 PE APARS

- HIPER APARS ARE ALSO IN THE CICS PSP BUCKETS ON THE WEB AND IN THE CICS FIX LISTS (COLUMN IN TABLE AND CSV FILE).

HIPER APAR PH47872 (CICS TS 6.1)

PH47872: REPEATING ABEND0C6 AND DFHPG0001 AFTER ABENDAICA ON X8 TCB WITH XPLINK

- AFTER A LOOP (AICA) PROCESSING ON AN X8 OR X9 TCB (RUNNING IBM TRANSFORMATION EXTENDER CODE USING XPLINK) , CICS ENDS UP WITH REPEATING 0C6 ABENDS AS EACH NEW TASK TRIES TO USE LE BECAUSE THE CICS TO LE INTERFACE IS NO LONGER OPERATIONAL. YOU MAY ALSO SEE OTHER ERRORS LIKE:
  - `DFHPG0001 AN ABEND (CODE ---/AKEA) HAS OCCURRED AT OFFSET X'2E70' IN MODULE DFHPGPG.`
  - `DFHKE0002 APPLID A SEVERE ERROR (CODE X'0506') HAS OCCURRED IN MODULE DFHKEDS`
  - `DFHSO0002 APPLID A SEVERE ERROR (CODE X'0C48') HAS OCCURRED IN MODULE DFHSOLS`
- THIS 0C6 ABEND IS A REPEATING ABEND BECAUSE THE LE ENVIRONMENT ASSOCIATED WITH THE QR TCB IS NO LONGER OPERATIONAL. EACH TIME A NEW TASK TRIES TO RUN AND ACCESS LE IT WILL GET THE SAME ABEND.
- FIXING PTF: UI81685

HIPER APAR PH50836

PH50836: DFHSO0123 RET CODE 448 RECEIVED FROM GSK_SECURE_SOCKET_INIT SSL CALL DURING CICS WEBSERVICE OUTBOUND REQUEST

- AFTER MIGRATION TO CICS TS 6.1 AN OUTBOUND WEBSERVICE REQUEST FAILS WITH:
  - `DFHSO0123 09/11/2022 11:12:29 XXXXXXXX RETURN CODE 448 RECEIVED FROM FUNCTION GSK_SECURE_SOCKET_INIT OF SYSTEM SSL. REASON: SERVER NAME NOT RECOGNIZED. RETURN CODE IS GSK_ERR_UNRECOCOGNIZED_NAME`
  - `THE HOSTNAME THAT IS SENT AS PART OF THE CLIENT HELLO PACKET CONTAINS ADDITIONAL BLANKS`

FIXING PTF: UI90517 (SUP BY UI90518)

HIPER APAR PH52185

PH52185: ABEND CODE DS0002 OPEN_DSTCB_FREE_CHAIN_ERROR

- AN ABEND OCCURRED WITH CODE=DS0002 AND MESSAGE:
  - DFHDS0002 XXXXXXXX A SEVERE ERROR (CODE X'0217') HAS OCCURRED IN MODULE DFHDSAT.

  .
- THE CICS INTERNAL TRACE SHOWED AN ENTRY LIKE:
  - `29093 L800T DS 0217 DSAT  *EXC* OPEN_DSTCB_FREE_CHAIN_ERROR` .
- SHORTLY PRIOR TO THE ABEND WITH DS0002 THERE WAS A SYSTEM SSL ERROR. THE CICS INTERNAL TRACE SHOWED:
  - `29094 S800C SO 080C SOSE  *EXC* SYSTEM_SSL_ERROR GSK_RESPONSE(GSK_API_NOT_AVAILABLE)`

    `FUNCTION(SECURE_SOC_INIT) RESPONSE(DISASTER) REASON(GSK_ERROR)`

    `GSK_RETURN_CODE(2)`

    `CERTIFICATE_USERID() CIPHER_SELECTED() HANDSHAKE_TYPE() PROTOCOL_USED()`

    .
- BOTH ENTRIES (BOTH TRANSACTIONS) INVOLVED THE SAME S8 TCB. THE PROBLEM IS CAUSED BY THE CHANGES AT CICS TS 6.1 TO ADD ADDITIONAL DIAGNOSTICS WHEN THERE IS A HANDSHAKE FAILURE.
- FIXING PTF: UI90518

HIPER APAR PH48737

PH48737: CICS TS 6.1 CEMT COMMAND FROM VIRTUAL CONSOLE TERMINAL FAILS WITH DFHME0138 MESSAGE DFHTM1715 NOT ISSUED

- AFTER UPGRADING TO CICS TS 6.1, YOU ISSUE A CEMT COMMAND FROM A VIRTUAL CONSOLE TERMINAL, AND THE FOLLOWING MESSAGE IS ISSUED:
  - `DFHME0138 MESSAGE DFHTM1715 NOT ISSUED BY DFHMEME BECAUSE MVS WTO IS SHORT ON STORAGE`
  - THE WRITE TO OPERATOR OR WTO FAILED WITH AN ABENDD23

- OTHER MVS MODIFY COMMANDS WORK FINE, IT ONLY FAILS WHEN ISSUING THE MVS MODIFY COMMAND TO A CICS REGION
- FIXING PTF: UI83935

- FIXING PTF: UI83935

HIPER APAR PH52021

PH52021: DFHSM0002 A SEVERE ERROR (CODE X'0D1E') HAS OCCURRED IN MODULE DFHSMMF WHEN FREEING OFF A TIOA

- THE FOLLOWING MESSAGES CAN BE SEEN WHEN CICS IS ATTEMPTING TO PROCESS A MRO CONNECTION REQUEST:
  - `DFHSM0002 A SEVERE ERROR (CODE X'0D1E') HAS OCCURRED IN MODULE DFHSMMF`
  - `DFHIR3785 INTERREGION CONTROL TASK CSNC ABEND. INTERREGION ACTIVITY WILL BE ABNORMALLY TERMINATED`
- THIS FAILS BECAUSE WE FAIL TO SET A POINTER TO THE SCA (SUBPOOL CONTROL AREA) WHEN A DUMMY TCTTE IS PASSED TO STORAGE MANAGER ON A FREEMAIN CALL.
- A NEW TERMINAL TYPE (TCTTETT) FIELD TCTTEDUM HAS BEEN ADDED TO INDICATE A DUMMY TCTTE. IF THE TCTTE PASSED ON THE FREEMAIN CALL TO STORAGE MANAGER IS A DUMMY TCTTE, THEN THE STORAGE FREEZE INDICATOR WILL NOT BE CHECKED.
- FIXING PTF: UI90652

HIPER APAR PH50066

PH50066: PLT PROGRAMS NOT CALLED AT STARTUP

- SOME CICS REGIONS DO NOT CALL THE STARTUP PLTPI PROGRAMS. THERE ARE NO ERROR MESSAGES OR INDICATIONS OF A FAILURE.

- CICS MODULE DFHSIPLT RUNS UNDER THE CPLT TASK AND HAS A PROC CALLED LOAD_PLT. CODE ADDED IN CICS TS 5.5 CHANGED THE WAY THAT THE PROC SETS ITS RETURN CODE SO THAT UNINITIALIZED STORAGE IS USED. THAT LEADS TO A LOGIC PROBLEM WHICH PREVENTS THE PLT PROGRAMS FROM RUNNING OR INITIALIZING.

- FIXING PTF: UI83148

HIPER APAR PH48500

PH48500: TASK SUSPENDED WITH A TIMEOUT INTERVAL DOES NOT WAKE UP WHEN THE TIMEOUT INTERVAL EXPIRES.

- THIS PROBLEM HAPPENS WHEN THE TASK HAS ALREADY BEEN PURGED OR FORCEPURGED ONCE USING THE CEKL TRANSACTION, AND THEN IT IS PURGED OR FORCEPURGED AGAIN USING THE CEKL TRANSACTION, WHILE THE TASK IS IN A SUSPEND WITH A TIMEOUT INTERVAL SPECIFIED.
- IN A DUMP YOU WILL FIND THE TASK IN A SUSPEND IN THE 'DS=1' (DISPATCHER) FORMATTER AND THE TASK WILL HAVE A TIMEOUT TIME THAT HAS LONG SINCE PASSED. THE DTA FOR THIS TASK WILL HAVE ONE OF THESE TWO BITS ON:
  - KILL_CEKL_PURGE_REQUESTED: THIS IS THE X'80' BIT AT +X'A2' INTO THE DTA
  - KILL_CEKL_FORCE_PURGE_REQUESTED: THIS IS THE X'40' BIT AT +X'A2' INTO THE DTA
  - THESE BITS PREVENT THE CEKL PURGE ATTEMPTS FROM BEING ACTIONED AND PREVENT THE WAIT_MVS FROM TIMING OUT NORMALLY
- FIXING PTF: UI82210

HIPER APAR PH48267

PH48267: PH47445 CEMT LOOP IS IN ERROR

- IT IS POSSIBLE FOR A CEMT INQUIRE TO RETURN NOT FOUND FOR A RESOURCE SUCH AS A PROGRAM OR TRANSACTION, SHOULD THAT RESOURCE NOT BE ALPHABETICALLY FOUND ON THE FIRST SCREEN RETURNED TO THE USER'S TERMINAL.

- CODE ADDED BY PH44360 INCORRECTLY REPORTS THAT THIS PROGRAM DOES NOT EXIST AS A NOT FOUND RESPONSE WILL BE RETURNED TO THE USER.

- DFHEMT56 HAS BEEN CHANGED TO ENSURE ALL RESOURCES ARE RETURNED TO THE TERMINAL WHICH ARE SUBJECT TO THE INQUIRE COMMAND.

- FIXING PTF: UI82043

SHARING THE CSD WITH DIFFERENT CICS RELEASES

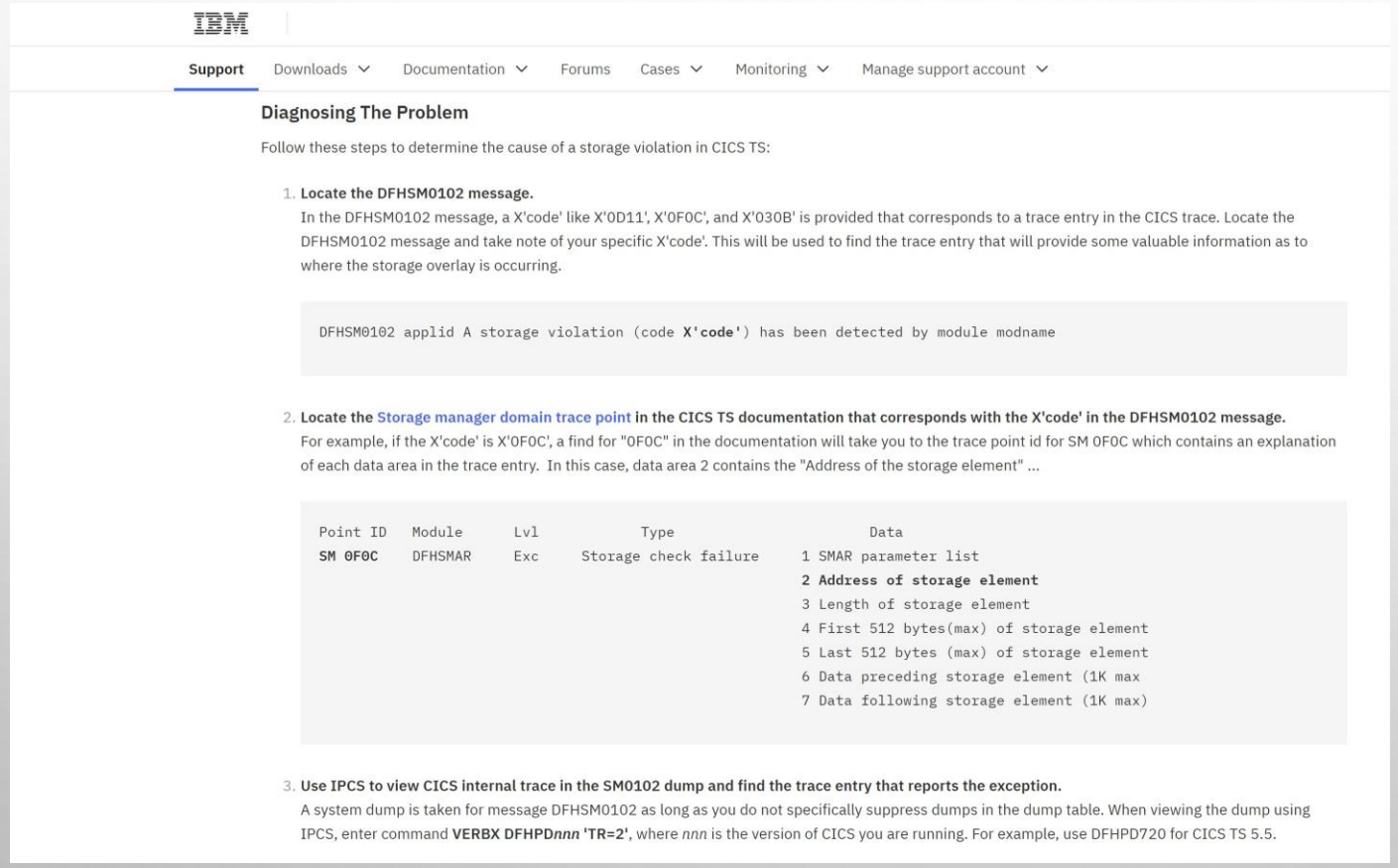
- AN EXPERIENCED CICS SYSTEM PROGRAMMER HIT AN ERROR IN LOWER-LEVEL REGIONS AFTER RUNNING THE CSD UPGRADE DURING THEIR MIGRATION TO CICS TS V6.1.

- THEY FORGOT TO READ THE DOCUMENTATION AND MISSED THE MENTION IN THE 'UPGRADE THE CSD' SECTION OF THE UPGRADING CICS REGIONS PAGE WHERE WE MENTION THAT:

  - *IF YOU HAVE RESOURCE DEFINITIONS IN YOUR CSD THAT SUPPORT OTHER IBM PRODUCTS, SUCH AS Z/OS, YOU MIGHT ALSO NEED TO UPGRADE THESE DEFINITIONS WHEN YOU START THE UPGRADE OF YOUR REGIONS. IF YOU NEED TO SHARE YOUR UPGRADED CSD WITH DIFFERENT CICS RELEASES, THE CSD MUST BE AT THE HIGHEST RELEASE, AND COMPATIBILITY GROUPS MUST BE SPECIFIED IN THE CORRECT ORDER.*

DIAGNOSING DFHSM0102 STORAGE VIOLATIONS

TECHNOTE: *DIAGNOSING DFHSM0102 STORAGE VIOLATIONS IN CICS TS*,



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Diagnosing The Problem

Follow these steps to determine the cause of a storage violation in CICS TS:

1. **Locate the DFHSM0102 message.**
   In the DFHSM0102 message, a X'code' like X'0D11', X'0F0C', and X'030B' is provided that corresponds to a trace entry in the CICS trace. Locate the DFHSM0102 message and take note of your specific X'code'. This will be used to find the trace entry that will provide some valuable information as to where the storage overlay is occurring.

```
DFHSM0102 applid A storage violation (code X'code') has been detected by module modname
```

2. **Locate the Storage manager domain trace point in the CICS TS documentation that corresponds with the X'code' in the DFHSM0102 message.**
   For example, if the X'code' is X'0F0C', a find for "0F0C" in the documentation will take you to the trace point id for SM 0F0C which contains an explanation of each data area in the trace entry. In this case, data area 2 contains the "Address of the storage element" ...

```
Point ID   Module     Lvl          Type                    Data
SM 0F0C    DFHSMAR    Exc    Storage check failure    1 SMAR parameter list
                                                      2 Address of storage element
                                                      3 Length of storage element
                                                      4 First 512 bytes(max) of storage element
                                                      5 Last 512 bytes (max) of storage element
                                                      6 Data preceding storage element (1K max
                                                      7 Data following storage element (1K max)
```

3. **Use IPCS to view CICS internal trace in the SM0102 dump and find the trace entry that reports the exception.**
   A system dump is taken for message DFHSM0102 as long as you do not specifically suppress dumps in the dump table. When viewing the dump using IPCS, enter command **VERBX DFHPD*nnn* 'TR=2'**, where *nnn* is the version of CICS you are running. For example, use DFHPD720 for CICS TS 5.5.

IBM Z SOFTWARE IDEAS PORTAL

- AS OF MARCH 2022, ALL EXISTING RFES FROM THE IBM REQUEST FOR ENHANCEMENT (RFE) COMMUNITY WERE MIGRATED TO THE IBM Z SOFTWARE IDEAS PORTAL
- **WELCOME TO THE IBM IDEAS PORTAL** (HTTPS://WWW.IBM.COM/IDEAS) - USE THIS SITE TO FIND OUT ADDITIONAL INFORMATION AND DETAILS ABOUT THE IBM IDEAS PROCESS AND STATUSES.
- **IBM UNIFIED IDEAS PORTAL** (HTTPS://IDEAS.IBM.COM) - USE THIS SITE TO VIEW ALL OF YOUR IDEAS, CREATE NEW IDEAS FOR ANY IBM PRODUCT, OR SEARCH FOR IDEAS ACROSS ALL OF IBM.
- **IDEASIBM@US.IBM.COM** - USE THIS EMAIL TO SUGGEST ENHANCEMENTS TO THE IDEAS PROCESS OR REQUEST HELP FROM IBM FOR SUBMITTING YOUR IDEAS.
- THE FOLLOWING LINK HAS THE UPDATED INSTRUCTIONS FOR SUBMITTING OR VOTING FOR AN IDEA: OPEN AND VOTE FOR AN ENHANCEMENT REQUEST FOR IBM Z SOFTWARE PRODUCTS

UPGRADING INFORMATION FOR CICS WHEN CHANGING RELEASE OF CICS, Z/OS, IMS OR DB2

- YOU WOULD LIKE TO KNOW WHAT PROBLEMS YOU MIGHT ENCOUNTER WHEN YOU UPGRADE FROM ONE RELEASE OF CICS TO ANOTHER. YOU ALSO WANT TO KNOW WHAT CICS PROBLEMS YOU MIGHT ENCOUNTER WHEN YOU UPGRADE TO A NEW RELEASE OF Z/OS, DB2, IMS, OR TO A NEW Z MAINFRAME.

- UPGRADING INFORMATION FOR CICS WHEN CHANGING RELEASES OF CICS, Z/OS, DB2 OR IMS . THIS TECHNOTE POINTS YOU TO DIFFERENT AREAS OF INTEREST LIKE:
  - CICS TS FOR Z/OS UPGRADING INFORMATION
  - CICS TS FOR Z/VSE UPGRADING INFORMATION
  - DB2 UPGRADING INFORMATION
  - IMS UPGRADING INFORMATION
  - Z/OS UPGRADING INFORMATION
  - Z16, Z15, Z14, OR Z13 UPGRADING INFORMATION

IBM SUPPORT PAGES

- IN THE SLIDES THAT FOLLOW THERE WILL BE A LINK PROVIDED FOR DIFFERENT PAGES OF REFERENCE AND IN ADDITION THERE WILL BE A DOCUMENT NUMBER LISTED
- IF BY CHANCE THE LINK (THAT IS PROVIDED IN THE PRESENTATION) EVER CHANGES AND YOU STILL NEED TO REVIEW THE MATERIAL, YOU CAN PLUG IN THE DOCUMENT NUMBER ON THE END OF THE FOLLOWING LINK, AND YOU WILL BE DIRECTED TO THE PAGE (WHERE XXXXXX IS THE DOCUMENT NUMBER):
- HTTPS://WWW.IBM.COM/SUPPORT/PAGES/NODE/XXXXXX
- IN ADDITION, THE IBM SUPPORT HOME PAGE HAS A SEARCH FIELD WHERE YOU CAN PLUG IN THE DOCUMENT NUMBER, AND IT WILL FIND IT AS WELL.

NEW FUNCTION APARS

- NEW FUNCTION APARS FOR CICS PRODUCTS (83349) HAS A LISTING OF LINKS TO ALL NEW FUNCTION APARS FOR CICS TRANSACTION SERVER AND ALL CICS TOOLS

- FOR NEW FUNCTIONS AND CAPABILITIES THAT HAVE BEEN ADDED TO CICS TRANSACTION SERVER FOR Z/OS (CICS TS) AND CICSPLEX SM BY IBM SERVICE, SEE THE CICS CONTINUOUS DELIVERY FEATURES PAGE IN THE IBM DOCUMENTATION

- FLASHES FOR ALL CICS NEW FUNCTION (NF) APARS ARE POSTED TO CICS SUPPORT PAGE

- ACCORDING TO THE SOFTWARE MAINTENANCE STRATEGY FOR CICS TS AND ITS EMBEDDED COMPONENTS, IBM RECOMMENDS THAT YOU UPGRADE TO THE LATEST RELEASE OF CICS EXPLORER TO OBTAIN THE MOST RECENT FUNCTIONALITY AND SERVICE. OLD RELEASES OF CICS EXPLORER ARE NOT GENERALLY UPDATED WITH NEW FUNCTION, BUT NEW CICS EXPLORER RELEASES ARE COMPATIBLE WITH ALL EARLIER VERSIONS OF CICS TS

CUSTOMER REQUIREMENTS ANSWERED IN CICS TS

OVER 100+ CUSTOMER REQUIREMENTS OR IDEAS (FORMERLY 'REQUESTS FOR ENHANCEMENT OR RFE'S) HAVE BEEN DELIVERED IN VERSIONS OF CICS TRANSACTION SERVER FOR Z/OS (CICS TS). YOU CAN FIND THE IDEAS THAT HAVE BEEN INCLUDED IN THE VARIOUS RELEASES AT THE FOLLOWING LINKS (WITH THE DOCUMENT NUMBER) :

- CUSTOMER REQUIREMENTS ANSWERED IN CICS TS 5.4 (618479)
- CUSTOMER REQUIREMENTS ANSWERED IN CICS TS 5.5 (741139)
- CUSTOMER REQUIREMENTS ANSWERED IN CICS TS 5.6 (6254676)
- CUSTOMER REQUIREMENTS ANSWERED IN CICS TS 6.1 (6567095)

DETAILED SYSTEM REQUIREMENTS FOR CICS TRANSACTION SERVER

- DETAILED SYSTEM REQUIREMENTS (DSR) CONTAIN THE SUPPORTED OPERATING SYSTEM REQUIREMENTS, HARDWARE REQUIREMENTS, SOFTWARE REQUIREMENTS, AND OTHER RELATED INFORMATION FOR A PRODUCT.

- THE FOLLOWING DOCUMENT CONTAINS THE LINKS TO THE DSR FOR SUPPORTED CICS RELEASES
  - DETAILED SYSTEM REQUIREMENTS FOR CICS TS AND RELATED PRODUCTS (318047)

- FROM THIS DOCUMENT YOU CAN SELECT THE DSR FOR THE FOLLOWING CICS RELEASES:
  - DETAILED SYSTEM REQUIREMENTS FOR CICS TS FOR Z/OS V6.1
  - DETAILED SYSTEM REQUIREMENTS FOR CICS TS FOR Z/OS V5.6
  - DETAILED SYSTEM REQUIREMENTS FOR CICS TS FOR Z/OS V5.5
  - DETAILED SYSTEM REQUIREMENTS FOR CICS TS FOR Z/OS V5.4
  - DETAILED SYSTEM REQUIREMENTS FOR CICS TS FOR Z/OS V5.3
  - DETAILED SYSTEM REQUIREMENTS FOR CICS TS FOR VSE/ESA V2.2

FINDING CICS PRODUCT DOCUMENTATION

- HOW DO YOU FIND CICS PRODUCT DOCUMENTATION FOR CICS TRANSACTION SERVER FOR Z/OS (CICS TS) AND CICS TOOLS?

- THE BEST PLACE TO FIND CICS PRODUCT DOCUMENTATION IS IN IBM DOCUMENTATION. DOCUMENTATION FOR MOST OF THE CICS TOOLS IS ALSO INCLUDED IN THE CICS TS DOCUMENTS.

- HERE IS A LINK THAT WILL DISCUSS FINDING THE CICS DOCUMENTATION AND HOW TO VIEW THE CICS MANUALS IN PDF:

  - FINDING CICS PRODUCT DOCUMENTATION (6132153)

FIX LISTS FOR CICS TS

- FIX LISTS SUMMARIZE ALL THE APARS FOR EACH VERSION, RELEASE, AND MODIFICATION LEVEL OF THE CURRENTLY SUPPORTED CICS PRODUCTS.

- THE FIXES BY VERSION FOR CICS PRODUCTS (318897) DOCUMENT CONTAINS LINKS TO THE AVAILABLE FIX LIST DOCUMENTS FOR CICS TS AND ITS RELATED PRODUCTS:

  - CICS ON TRANSACTION SERVER AND CICS/VSE
  - CICS EXPLORER
  - CICS TOOLS
  - OTHER PRODUCTS

PREVENTIVE SERVICE PLANNING

- FINDING CICS PSP BUCKETS (346951) HAS A LISTING OF ALL PSP BUCKETS FOR CICS TRANSACTION SERVER AND ALL CICS TOOLS:
  - CICS TRANSACTION SERVER FOR Z/OS V6.1
  - CICS TRANSACTION SERVER FOR Z/OS V5.6
  - CICS TRANSACTION SERVER FOR Z/OS V5.5
  - CICS TRANSACTION SERVER FOR Z/OS V5.4
  - CICS TRANSACTION SERVER FOR Z/VSE V2.2
  - CICS TRANSACTION GATEWAY
  - CICS TOOLS

- THIS PAGE ALSO CONTAINS INSTRUCTIONS ON HOW TO OBTAIN THE PSP BUCKETS FOR ANY IBM PRODUCT

ORDERING CICS PRODUCTS AND MAINTENANCE

- YOU WOULD LIKE TO ORDER A CICS PRODUCT OR MAINTENANCE. YOU WANT TO KNOW WHAT OPTIONS ARE AVAILABLE FOR ORDERING THE PRODUCT, INDIVIDUAL PTFS, AND CUMULATIVE MAINTENANCE FOR CICS OR ANY OF THE CICS TOOLS.
- THE ORDERING CICS PRODUCTS AND MAINTENANCE (660433) PAGE CONTAINS DETAILS ON HOW TO ACCOMPLISH THIS. THE PAGE CONTAINS RELEVANT LINKS LIKE:
  - ORDERING Z/OS AND RELATED IBM PRODUCTS IN THE Z/OS DOCUMENTATION FOR THE VARIOUS INSTALLATION METHODS YOU CAN USE WHEN ORDERING CICS TS AND RELATED IBM PRODUCTS
  - USER GUIDE, VIDEOS, AND FAQS ON THE SHOPZ MAIN PAGE FOR INFORMATION ON PLACING AND TRACKING ORDERS FOR SYSTEM Z SOFTWARE
  - IF YOU ARE USING Z/VSE, SEE THE IBM: Z/VSE - SERVICE AND SUPPORT PAGE TO ORDER PTF(S), AND "PRICING AND BUYING" FROM THE Z/VSE RESOURCES AND EVENTS PAGE TO ORDER IBM Z SOFTWARE.
  - IF YOU ARE USING DISTRIBUTED PRODUCTS LIKE CICS TRANSACTION GATEWAY FOR MULTIPLATFORMS, GO TO FIX CENTRAL TO DOWNLOAD FIXES.

ANNOUNCEMENT LETTERS FOR CICS

- ANNOUNCEMENT LETTERS FOR CICS PRODUCTS (345711) CONTAINS LINKS TO THE ANNOUNCEMENT LETTERS FOR THE VARIOUS VERSIONS OF CICS

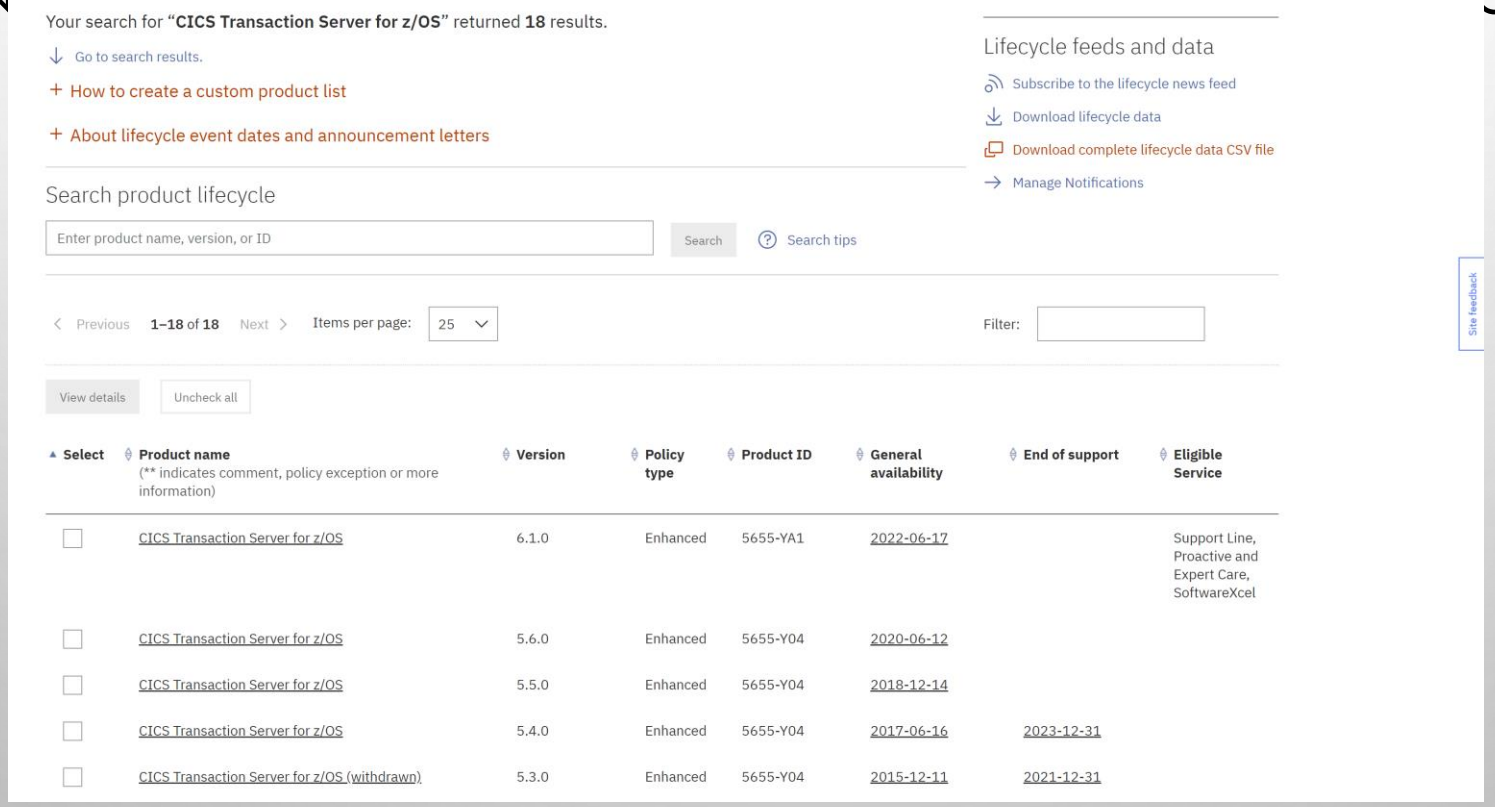
- CAN BE LINKED TO FROM ANNOUNCEMENT LETTERS ON THE CICS SUPPORT PAGE

- IBM CICS TRANSACTION SERVER FOR Z/OS 5.5, 5.6, AND 6.1 ARE UPDATED (JANUARY 2023)

- IBM CICS TRANSACTION SERVER FOR Z/OS OPEN BETA PROGRAM IS UPDATED (JANUARY 2023)
  - IBM CICS TS OPEN BETA

IBM SOFTWARE SUPPORT LIFECYCLE

- IF YOU WANT TO KNOW WHEN THE END OF SERVICE DATE IS FOR ANY IBM SOFTWARE PRODUCT YOU CAN FIND THAT VIA THE PRODUCT LIFECYCLE PAGE.
  - YOU CAN ALSO DOWNLOAD THE RESULTS TO A CSV FILE IF YOU CHOOSE TO DO SO



MUST GATHER DOCUMENTATION (GENERAL)

MUSTGATHER DOCUMENTS AID IN PROBLEM DETERMINATION AND SAVE TIME RESOLVING CASES.

COLLECTING MUSTGATHER DATA EARLY, EVEN BEFORE OPENING A CASE HELPS IBM® SUPPORT QUICKLY DETERMINE IF:

- SYMPTOMS MATCH KNOWN PROBLEMS (REDISCOVERY).
- THERE IS A NON-DEFECT PROBLEM THAT CAN BE IDENTIFIED AND RESOLVED.
- THERE IS A DEFECT THAT IDENTIFIES A WORKAROUND TO REDUCE SEVERITY.
- LOCATING ROOT CAUSE CAN SPEED DEVELOPMENT OF A CODE FIX.

- YOU CAN FIND THE INFORMATION MUSTGATHER DOCUMENT COLLECT TROUBLESHOOTING DATA (MUSTGATHER) FOR CICS PRODUCTS (340199)
- THIS INFORMATION IS ALSO INCLUDED IN THE COLLECTING CICS TROUBLESHOOTING DATA (CICS MUSTGATHER) FOR IBM SUPPORT PAGE OF THE IBM DOCUMENTATION FOR CICS

MUSTGATHER DOCUMENTATION (SPECIFIC)

AFTER YOU COLLECT GENERAL INFORMATION, GATHER INFORMATION THAT IS SPECIFIC TO THE PROBLEM YOU ARE HAVING. IN THE IBM DOCUMENTATION PAGE REFERENCED ON THE PREVIOUS SLIDE YOU CAN CLICK THE PROBLEM TYPE OR COMPONENT TO VIEW A LISTING OF SPECIFIC DOCUMENTATION THAT THE SUPPORT TEAM REQUIRES TO DIAGNOSE YOUR PROBLEM. FOR EXAMPLE:

- ABEND 878 OR 80A
- CICS-MQ ADAPTER OR CICS-MQ BRIDGE
- CMCI JVM SERVER
- DB2®
- FILE CONTROL (NON-RLS)
- FILE CONTROL (RLS)
- IMS DATABASE CONTROL (DBCTL)
- IP INTERCONNECTIVITY (IPIC)
- JAVA™ (JVM SERVER)
- PERFORMANCE
- WEB SERVICES, XML, AND JSON TRANSFORMATION

SOFTWARE MAINTENANCE STRATEGY

- SOFTWARE MAINTENANCE STRATEGY FOR CICS TS AND ITS EMBEDDED COMPONENTS

- CICS TS SUPPORT IS DELIVERING THE INFORMATION IN THIS DOCUMENT TO HELP CUSTOMERS PLAN FOR UPDATES TO CICS TRANSACTION SERVER FOR Z/OS (CICS TS) AND RELATED SOFTWARE COMPONENTS SUCH AS WEBSPHERE LIBERTY AND CICS EXPLORER.

- INSTALLING APAR FIXES (PTFS) USING RECOMMENDED SERVICE UPGRADES (RSUS) AS EARLY AS POSSIBLE CAN HELP AVOID PROBLEMS THAT COULD RESULT IN A SERVICE CALL, AND AS LONG AS YOU TEST APPROPRIATELY, HELP REDUCE RISKS TO YOUR BUSINESS.
- THIS DOCUMENT CONTAINS SECTIONS LIKE UPDATE RECOMMENDATIONS

MAPPING CICS RELEASES FROM APARS AND PTFS TO CICS EXTERNAL VERSIONS

- HOW DO YOU MAP THE RELEASE NUMBERS THAT IBM USES FOR CICS APARS AND PTFS TO THE CORRESPONDING EXTERNAL VERSIONS OF CICS? FOR EXAMPLE, HOW WOULD YOU KNOW THAT RELEASE 400 CORRESPONDS TO CICS TRANSACTION SERVER FOR Z/OS (CICS TS) V6.1?

- REFERENCE ITEM: MAPPING CICS RELEASES FROM APARS AND PTFS TO CICS EXTERNAL VERSIONS

UPDATING TO THE LATEST WLP VERSION

- UPGRADING LIBERTY PROFILE FOR CICS TS AND Z/OS CONNECT EE TO LATEST FIX PACK (556239)

- THIS DOCUMENT PROVIDES INFORMATION ON HOW FIND OUT WHAT APARS ARE NEEDED TO UPGRADE CICS TRANSACTION SERVER FOR Z/OS (CICS TS) AND Z/OS CONNECT ENTERPRISE EDITION (EE) TO THE LATEST FIX PACK VERSION OF WEBSPHERE APPLICATION SERVER LIBERTY PROFILE:
  - TABLE 3. FIXES FOR WEBSPHERE APPLICATION SERVER LIBERTY, BY RELEASE OF CICS TRANSACTION SERVER FOR Z/OS IN TOPIC CICS CONTINUOUS DELIVERY FEATURES OF THE CICS TS DOCUMENTATION LISTS OF ALL THE CICS TS APARS THAT PROVIDE SUPPORT FOR LIBERTY FIX PACKS.
  - TOPIC *Z/OS CONNECT ENTERPRISE EDITION CHANGE HISTORY* IN THE Z/OS CONNECT EE DOCUMENTATION LISTS OF ALL THE Z/OS CONNECT EE APARS THAT PROVIDE SUPPORT FOR LIBERTY FIX PACKS.
  - THE PTFS FOR THESE APARS ARE APPLIED TO CICS TS AND Z/OS CONNECT EE LIKE ANY OTHER PTFS (I.E ANY **++HOLD** ACTIONS MUST BE FOLLOWED)

EZA2897I WHEN SENDING DUMPS OR TRACE TO IBM

- YOU ARE TRYING TO FTP DIAGNOSTIC DATA LIKE DUMPS OR TRACE TO TESTCASE.BOULDER.IBM.COM USING ENHANCED CUSTOMER DATA REPOSITORY (ECUREP) WHEN WORKING WITH IBM SUPPORT. YOUR BATCH JOB, WHICH USED TO WORK (AND USES TLS 1.1), NOW FAILS WITH MESSAGES:

```
EZA2897I AUTHENTICATION NEGOTIATION FAILED

EZA1534I CONTROL CONNECTION WITH TESTCASE.BOULDER.IBM.COM DIES
```

- THE FTP CLIENT USES TLS 1.1 BY DEFAULT, BUT IT IS NO LONGER SUPPORTED. IBM MADE A CHANGE TO TESTCASE.BOULDER.IBM.COM ON 24 APRIL 2022, NOW TLS 1.2 OR LATER IS REQUIRED.
  - UPDATE THE DD CARD FOR CEEOPTS. FOR EXAMPLE, THE FOLLOWING PARAMETERS OVERRIDE TLS 1.1 WITH TLS 1.2:

```
//CEEOPTS DD *
ENVAR("GSK_PROTOCOL_TLSV1=0")
ENVAR("GSK_PROTOCOL_TLSV1_2=1")
```