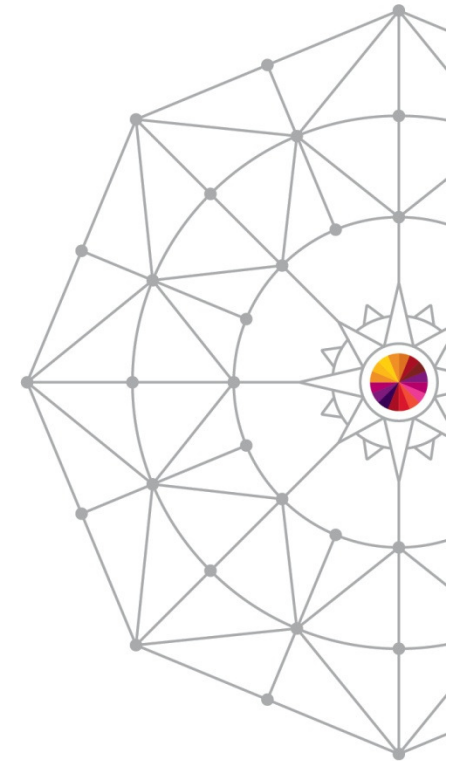


CICS Nuts Bolts and Gotchas

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Sample Exit DFH\$XTSE Storage Violation

- You are running with the sample exit DFH\$XTSE and recently upgraded to CICS Transaction Server for z/OS (CICS TS) V5.1. During CICS initialization, you receive DFHSM0102 A storage violation (code X'0D11') has been detected by module DFHSMMF.
- **Symptom**
 - [DFHSM0102](#) A storage violation (code X'0D11') has been detected by module DFHSMMF.
 - The exception trace entry is: *EXC* Storage_check_failed_on_freemain_request

Cause

- DFHEISTG has moved within the storage GETMAINED by DFHEIPA for the sample exit [DFH\\$XTSE](#). Sample exit DFH\$XTSE declares a one byte field for RESP, into which 4 bytes are later moved. The last byte moved overlays the trailing check zone.

Diagnosing the problem

- Internal trace shows that the GETMAIN for the storage, that is eventually freed in error, is used by the exit. The first character of the trailing check zone is overlaid.

Looking at the exit program, DFH\$XTSE is defined with:

```
RESP      DS X
```

This creates a 1 byte field for RESP. When assembled, the exit runs instruction:

```
MVC RESP(4),EIBRESP
```

This moves 4 bytes into the one byte field, causing the overlay of the trailing check zone.

- **Resolving the problem**

In your user exit, or sample exit DFH\$XTSE, change the RESP declaration from:

```
RESP      DS X
```

to:

```
RESP      DS F
```

This will define the RESP field to the correct size.

INCREASED CPU CONSUMPTION AFTER MIGRATING FROM CICS TS R3.2 WITH EI 1-2 TRACE TURNED ON

- You have just migrated from CICS/TS R3.2 up to R4.2 and have EI1-2 trace turned on. You see an possible increase of CPU consumption up to 33%. When you turn on EI1 or not turn on EI tracing you do not see this increase of CPU consumption.
- Apply CICS PTF
 - R420 UK97124
 - R510 UK97125

MIGRATING TO CICS 4.2 YOU MAY EXPERIENCE CPU INCREASE IF APPLICATIONS ISSUE LARGE GETMAINS SPECIFYING INITIMG(X'00')

- Large CICS GETMAINS with an INITIMG of zeros, consume an increased amount of CPU, when compared with earlier versions of CICS Transaction Server for z/OS.
- The operations performed to initialise storage returned by a CICS GETMAIN with zeros, have been modified to improve performance.
- APPLY CICS PTF
 - R410 UK93832
 - R510 UK93833

CICS Liberty JVMServer installs in a DISABLED state

- You applied maintenance to CICS to upgrade the Liberty Server. Now when you install a Liberty JVMServer within CICS you receive the following messages in the CICS log:
 - DFHSJ0215 The JVM SERVER xxxxxxxx FAILED TO INITIALIZE THE OSGI FRAMEWORK. THE JVM WILL BE TERMINATED.
 - DFHSJ0914 JVMSERVER xxxxxxxx IS DISABLED BECAUSE THE LANGUAGE ENVIRONMENT ENCLAVE WAS NOT CREATED.
- CICS embeds the Liberty code within its /wlp zFS directory. The CICS wlp directory should only contain the latest version of the Liberty code and having multiple versions would lead to unexpected errors. There are 2 causes that can result in this incorrect file system:
 - The SMP/E install of the CICS Liberty PTFs did not work properly. The install process is managed by the DFHWLPSH script that has 2 phases. It first deletes the current contents of the CICS/wlp directory and then "un-paxes" the new content into the directory.
 - The zFS structure that the SMP/E APPLY uses is copied to other z/OS systems. However, that copy needs to be done as a complete replacement. If it is done as a merge than all the old unwanted content will be left in the CICS directories. This is a problem for Liberty as the Liberty files will change dramatically on every CICS/Liberty PTF. It is imperative that the zFS structure is completely replaced.
- In this case, you found that the problem was caused by the second scenario. You used the following COPY command to deploy the fix to your other z/OS systems:
 - `cp -mR /usr/lpp/cicsts/cicsts51/maintenance/* /usr/lpp/cicsts/cicsts51`
- This copy "replaced" the existing files and also "added" any new files, resulting in the Liberty code having multiple versions of the files in the /wlp directory and this caused the error. By adding the following REMOVE command ahead of the COPY to empty out the target directory first:
 - `rm -r /usr/lpp/cicsts/cicsts51/*`
- You were able to create a clean copy of the zFS files. Now the Liberty JVMServer installs successfully.

DFHKE1800 due to 0C4 in DFHKERCD offset 1E0

- Your CICS Transaction Server for z/OS (CICS TS) region abends with DFHKE1800. You are running with CA Common Services. Your CICS joblogs include messages from CA Technologies module CAS9578E reporting an Abend0C4 followed by a dump taken by CA. CICS then takes a KERNDUMP and abends:

CAS9578E - Product = KO50 PSW = 078D1001 9CB671F8 Completion Code = 00C4
DFHKE0201 ABOUT TO TAKE SDUMP. DUMPCODE: KERNDUMP, DUMPID: 0/0000. (MODULE DFHKESTX).
DFHKE1800 ABNORMAL TERMINATION OF CICS IS COMPLETE.

- **Cause:** Missing CA Technologies fix for CA Common Services
- **Diagnosing the problem:** The ABEND0C4 occurs in module DFHKERCD offset x'1E0'.

DFHKERCD is running in 64-bit mode and is failing on an LG instruction (E340 7010 0004) due to the contents of Register 7. Reg7 should be the load point of the module that owns the current kernel stack for the failing CICS task. The 0C4 occurs because DFHKERCD is running in 64-bit mode, and the address loaded into Reg7 incorrectly has a high-order 8-bit turned on.

The current kernel stack for the failing CICS task belongs to module DFHAPXME. The address of DFHAPXME found in the kernel stack points to a copy of DFHAPXME, not the real version. Loader domain shows that the real DFHAPXME is loaded elsewhere. This copy is provided by CA Common Services processing, and is the one that has the high-order bit turned on, causing DFHKERCD to take the 0C4.

- **Resolving the problem:** Contact [CA Technologies](#) support for CA Common Services. The fix needed is CA Technologies RO45343.

INSUFFICIENT STRINGS FOR DFHCSD ACCESS CSACSDCT NOT DECREMENTED

- A CICS task which issues EXEC CICS CREATE and EXEC CICS CSD commands results in the CSACSDCT string counter not decrementing when the task ends.
- When the CSDSTRNO value specified in the SIT is exhausted, EXEC CICS CSD commands will receive:
 - RESP 00000119 CSDERR and RESP2 00000005 indicating insufficient strings.
- Monitor OPEN APAR PI20232

ABEND AEIV when issuing a CHANGE PASSWORD command with a blank password

- CICS application issues a CHANGE PASSWORD command with a blank PASSWORD
- DFHESN gets control and then calls DFHXSPW UPDATE_PASSWORD to handle it
- In DFHXSPW, it realizes the zero password length, returns to DFHESN with an EXCEPTION response and a reason code of INVALID_PASSWORD_LEN
- DFHESN then raised the LENGERR condition back to application
- As the LENGERR condition is invalid for CHANGE PASSWORD command, there is no proper handling process for it in the application, and this causes the AEIV abend.
- CICS/TS 520 APAR= PI20226 / PTF= UI19922
- CICS/TS 510 APAR= PI17276 / PTF= UI18255
- CICS/TS 420 APAR= PI16955 / PTF= UI18255

No way to control who is allowed to use SP Translator option when using the CICS Integrated Compiler

- To determine who is allowed to use the SP option on CICS translator, you can use RACF and control who is allowed to load the DFHEITBS table at translation time
- Using integrated CICS compiler in COBOL, module DFHEITBS is not loaded anymore because it is linkedit with the integrated translator. This causes RACF to not be able to protect who is allowed to use the translator SP options.
- Monitor OPEN APAR PI19207

CICS LOOP IN DFHFCRO WHILE CLOSING AN RLS FILE

- CICS encounters an 0C4 abend while closing a RLS file. After this, the region fails to respond to any commands because transaction CFQR is in a tight loop. The region has to be cancelled
- DFHFCRO has been changed to deallocate the data set after the FC_RLS_ACB_CHAIN has been modified to remove the file
- CICS/TS R420 APAR PI17260 / PTF UI19923
- CICS/TS R510 APAR PI21385 / PTF UI19924
- CICS/TS R520 APAR PI21385 / PTF UI19925

DFHPC0409 ABENDS AZTA AND AZTA HAVE BEEN ISSUED WHILE PROCESSING ABEND AZI3 FOR THE SAME TASK

- You use CEDF in a TOR running a transaction in an AOR. The TOR used a non-zero RTIMEOUT value in single terminal mode
- Exceeding the RTIMEOUT value results in an AZI3 abend in the AOR, and the recovery routine in DFHEDFP is entered. Registers used to address storage are not valid
- When register 2 is used in a subsequent DFHXMIQM macro, the terminal is not removed from the CEDF task, which results in the AZTA abends, which in turn cause the PC0409 abend and the AOR is terminated
- The CEDF session in the TOR shows an abend, but the TOR is not terminated
- CICS/TS R510 APAR PI13165 / PTF UI19019
- CICS/TS R520 APAR PI20398 / PTF UI19968

Autojournal write add and write add complete records may be out of sequence with writes to an RLS ESDS

- On a system with multiple CICS regions, it is possible for CICS tasks to interleave records to the same non-recoverable RLS ESDS file, and the subsequent calls to journal the write-add-complete replication log records.
- Usually, locking occurs to ensure these records are in the correct RBA sequence. However, a codepath exists where a FCT definition of the file has JNLSYNCWRITE=NO specified. As a consequence, log buffers can be flushed out of order causing out of sequence records on the replication log and what is on the VSAM RLS ESDS.
- CICS/TS R510 APAR PI16561 / PTF UI20138
- CICS/TS R520 APAR PI16561 / PTF UI20139

CEMT SET TERMINAL(*) OUTSERVICE causes overlay of storage.

- An attempt to make a change to the attributes of more than 32767 terminals using CEMT SET TERMINAL(*) xxx, where xxx is the attribute being set results in storage overlays.
- This is because a multiply halfword instruction in CEMT code causes a large negative value to be used as an offset into storage and this causes the overlay.
- DFHEMT56 has been changed to limit the number of elements being set for CEMT SET TERMINAL to 32766. If the number of elements is greater than or equal to 32767, a "too many elements" message is displayed and no terminals will be updated by the SET request.

- CICS/TS R420 APAR PI15520 / PTF UI17954
- CICS/TS R510 APAR PI17119 / PTF UI17958
- CICS/TS R520 APAR PI20224 / PTF UI19969

CA-7.SVCA-04 and CA-7.U7SVC-99 RC=00000004 when using CICS TS 5.1 with CA Common Services

- **Problem:** Jobs triggered by the CA-7 SVC in CICS fail after upgrading to CICS Transaction Server for z/OS (CICS TS) V5.1. You receive error CA-7.SVCA-04 security extract failed and CA-7.U7SVC-99 error return from SASSSVCA with RC 00000004. You are using CA Common Services interfacing with CA-7. You might see different failures when using other CA products like ACF2 that interface with CA Common Services.
- **Cause:** CA Common Services module is referencing incorrect offsets within CICS TS V5.1 control blocks
- **Diagnosing the problem:** You will find no indication of a error within CICS trace. Only error messages issued by CA products are seen.
- **Resolving the problem:** Apply CA Common Services fix TR69205

ASP3 or ASP7 and DFHAP0002 error 3285 in DFHD2D2 when accessing DB2 from a CICS TS application

- **Problem:** Your application fails with an ASP3 abend (abenASP3) or ASP7 abend (abenASP7) and message DFHAP0002 with severe error code X'3285' in module DFHD2D2. You might also see and abend 04E (abend04E) with DB2 reason code 00F31105. This occurs when you run an application in CICS Transaction Server for z/OS (CICS TS) V5.1 or CICS Transaction Server for z/OS (CICS TS) V5.2.
- **Cause:** DB2 APAR PM57744 must be applied. This requirement is documented in the CICS TS V5.1 and CICS TS V5.2 [detailed system requirements](#).
- **Resolving the problem:** Apply PTF for DB2 APAR [PM57744](#) (DB2 V10.1 PTF UK78499 or DB2 V9.1 PTF UK78500). The fix is included in the base code for DB2 V11 and higher.

KERNDUMP after upgrading to CICS TS 4.2 or 5.1 using IMS



- **Problem:** You have upgraded to CICS Transaction Server for z/OS (CICS TS) V4.2 or V5.1, and connect to IMS. Your CICS region ends with a KERNDUMP after an ABEND 0C4 or 0C7, that is reported in message IEA995I SYMPTOM DUMP OUTPUT.
- **Cause:** The QR TCB is missing the CICS ESTAE DFHKESTX, due to IMS incorrectly canceling it.
- **Diagnosing the problem:** Looking at a dump you will find that the kernel error table shows the 0C4 or 0C7 occurred on a kernel number representing the KTCB for an L8 TCB. This L8 TCB does not have a task associated with it and the module listed in the table is DFHDSDS3, which is where the TCB is when it is in a normal wait.
- **Resolving the problem:** Apply the IMS PTF for your version of IMS:
 - IMS V12: PTF UK94969 for APAR [PM88335](#)
 - IMS V13: PTF UK95514 for APAR [PM90585](#)



Apply PTF UI15115 if using transient data queues with CICS TS 5.1

- **Abstract:** If you are using CICS Transaction Server for z/OS (CICS TS) V5.1 with transient data (TD) queues, you should apply PTF UI15115. This PTF fixes several serialization problems that can cause abend 0C4 in DFHTDB, LMQUEUE and ENQUEUE deadlocks, DFHDS0002 severe error code 0067 in DFHDSSR, DFHTD0180, DFHTD0382, and DFHTD0384. DFHSR0622 and DFHAP0001 abend 0C4 in DFHZIS2 can also occur.
- **Content:** In CICS TS V5.1, transient data became threadsafe for all users. This introduced various serialization problems that are described in the following CICS TS V5.1 APARs:
- **APAR PTF Description:**
 - [PM98076](#) PTF UI12013 DFHTD0001 AN ABEND (CODE 0C4/AKEA) DFHTDB - TD PURGE PROCESSING NOT LOCKED WHEN RUNNING UNDER L8 TCBS
 - [PM98235](#) PTF UI12853 LMQUEUE AND ENQUEUE DEADLOCKS FOR RECOVERABLE TD QUEUE
 - [PI08308](#) PTF UI15115 DFHDS0002 SEVERE ERROR (CODE X'0067') AND DFHTD0180 MESSAGE
 - [PI13293](#) PTF not available DFHSR0622 AN ATTEMPT TO OVERWRITE THE ERDSA AND DFHAP0001 ABEND (CODE 0C4/AKEA) IN DFHZIS2
- The PTFs for the first three APARs fix one module, DFHTDB. Therefore when applying PTF **UI15115**, you will be applying the fixes for these three APARs to CICS TS.

Jobs submitted from Internal Reader run under wrong USERID after upgrading to CICS TS 5.1

- **Problem:** After upgrading to CICS Transaction Server for z/OS (CICS TS) V5.1, the jobs submitted from the Internal Reader are now running under the wrong userid. Instead of using the userid of the task that wrote the JCL to the internal reader, the job is using the CICS region userid. You are using CA Top Secret Security as the external security manager (ESM).
- **Symptom:** The problem with the jobs being submitted with the userid of the CICS region only occurs when the JCL is submitted to the internal reader through an indirect transient data queue (TDqueue) destination. If the JCL is written to a TD queue that is pointing directly to the DD associated to the Internal Reader, the job is submitted with the correct userid.
- **Cause:** The CA Top Secret IJU parameter should cause a USERID= to be included in the job card when written to the internal reader. However, after migrating to CICS TS V5.1, this functionality is no longer working and no USERID= is being added to the job card. As such, when the JCL is run, the job runs under the CICS region userid.
- **Resolving the problem:** Apply CA fix **TR70790** to resolve this problem.

IEA995I 0C4 during CICS TS 5.1 startup after upgrading if using CA ENF

- **Problem:** You receive a system dump with a system completion code of 0C4 (S0C4) and reason code 0000003B during CICS Transaction Server for z/OS (CICS TS) V5.1 initialization.
- Minimum CA maintenance requirements for CICS TS V5.1 had not been installed.
- **Diagnosing the problem:** A dump of the 0C4 program check shows the abend is in DFHKESTX. This is the component responsible for handling abends in other areas of CICS. More than likely, the program check occurs when CICS is attempting to link to DFHLDLD. CICS must have been in AMODE 64 at the time, and DFHKESTX (still running AMODE 64) attempts to load information about the module that experienced the error. It loads the module header information address from the domain gate table. The abend is often due to a hook into CICS from CA product CA ENF when there is a bad address in the LD domain table, and the 'copy' of the first few bytes of DFHLDLD.
- **Resolving the problem:** Ensure all CA maintenance relating to CICS TS V5.1 is applied. Recycle CA ENF after downloading, receiving, and applying the CA PTFs.
- The following is from the CA website:
 - The minimum support requirements for CICS Transaction Server V5R1 are-

```
> ENF/CICS
```

```
-----
```

```
CA Common Services for z/OS r14.1 plus
```

```
PTFs RO53837, RO54378, RO55429, RO56477, RO59887, RO64763
```

```
or
```

```
CA Common Services for z/OS v14.0 plus
```

```
PTFs RO31927, RO52036, RO54279, RO55317, RO56475, RO59886, RO64766, RO66173
```

RPL FEEDBACK WORD 41080040 RECEIVED FROM VSAM WHEN THEY ATTEMPT TO DYNAMICALLY ADD A STRING TO A CICS DEFINED LSRPOOL

- OPENAPI Programs accessing File Control Threadsafe in a CICS region receive RPL feedback word 41080040. This indicates VSAM did not have a Placeholder (PLH) control block available for the request. This should not occur in CICS. If there are 10 strings defined for the LSRPOOL CICS will suspend the 11th transaction that would need a string with FCSRSUSP. The reason there were already 10 active strings from the VSAM perspective is because they will use a string during CLOSE processing to issue a internal Write Buffer request. This is a timing issue.
- DFHFCL has been altered to allocate an additional string when an LSRPOOL is built, up to a maximum of 255 strings in total.
- Apply PTF: R510 UI14693

Abend U1800 in DFHKELCA can cause CICS TS 5.1 region to end

- Calling of a GLUE program causes storage overwrite leading to unexpected behaviour
- During the execution of a task an enabled GLUE is linked to. While setting up the GLUE environment the registers are saved into a save area that is too small. This causes storage to be overwritten, dependent on where the overwrite occurs this can cause unpredictable results.
- DFHUEH has been changed to increase the size of the register save area.

- Apply PTF UI15119 for APAR PI10485

CONL transaction shows extremely high CPU in CICS TS region

- You look at performance monitoring data for your CICS Transaction Server for z/OS (CICS TS) regions and notice that one of the regions has an extremely high amount of CPU usage for transaction CONL. This is the long-running CICSplex SM (CPSM) transaction. You might see high CPU usage for other long running CPSM transactions such as COI0, CONA, and CONL.
- If you have CPSM running, CONL will run on the CICS region from initialization until the region is brought down. If the system initialization parameter (SIT) monitoring frequency parameter MNFREQ is allowed to default, the CICS monitoring data is never reset. Therefore, it appears that the transaction is taking large amounts of CPU. This is true for any long running transaction.
- Set the [MNFREQ](#) SIT parameter, instead of allowing it to default to zero.

PM60830 improves performance if using CICS TS 4.2 or 5.1 and IMS 12

- If you are using CICS Transaction Server for z/OS V4.2 or V5.1 with IMS V12, you should apply the IMS PTF for HIPER APAR PM60830 (UK81843). This APAR resolves a performance regression or degradation problem that can occur when upgrading from IMS V11 to V12 and running CICS-IMS quasirent applications. PM60830 should also improve performance if you are making your CICS-IMS applications threadsafe.
- Following are highlights from testing done at IBM that show performance improvements when comparing CICS TS V4.2 with IMS V11 running a quasirent application to CICS TS V4.2 with IMS V12 running a threadsafe application.
 - 31.36% improvement in external throughput rate (ETR) or transactions per second
 - 6.78% improvement in efficiency or internal throughput rate (ITR = ETR divided by CPU% busy)
 - 43.33% reduction in transaction response time
 - 5.89% reduction in CICS service time per transaction

Performance Hit End of Day Statistics

- Statistics intervals can occur simultaneously across many CICS regions in the same z/OS image, and this can degrade performance. To prevent this, you should vary the statistics interval occurrence time for each CICS region.
- You can use the sample utility program DFH\$STED to vary the end-of-day time of each CICS region it is installed in, and therefore vary the interval occurrence time of these CICS regions.
- The source code for DFH\$STED is supplied in the SDFHSAMP samples library, and the pregenerated version is supplied in SDFHLOAD
- More Information at:

<http://publib.boulder.ibm.com/infocenter/cicsts/v3r2/index.jsp?topic=/com.ibm.cics.ts.doc/dfha6/topics/dfha62e.html>

CICS / IMS Connection

- Your CICS region fails to connect to IMS and you receive message DFHDB8222 Connection has failed. DBCTL return code is 36 (RC36). You also receive message DFHDB8111 with return code 36 and DFHDB8102. This occurs during CICS startup or when you enter transaction CDBC to connect to IMS from CICS Transaction Server for z/OS (CICS TS) V4.2.
- The following message sequence appears in the CICS log:
 - F CICS1,CDBC CON SUF(00)
 - +DFHDB8222 Connection has failed. DBCTL return code is 36.
 - +DFHDB8111 E Connection has failed. DBCTL return code 36.
 - +DFHDB8102 I Disconnection from DBCTL is now complete.
- **Cause:** IMS is not recognizing the new parameters being passed by CICS in the participant adapter parameter list (PAPL).
- Apply the required PTF(s) applicable to your IMS release:
 - IMS V12 New function APARs:
 - [PM31420](#) (PE PTF UK70991)
 - [PM45414](#) (PTF UK71251)
 - [PM47327](#) (PTF UK73103) - fixing APAR for PM31420
 - IMS V11 toleration only - [PM31729](#) (PTF UK67278)
 - IMS V10 toleration only - [PM31730](#) (PTF UK67279)

Customer requirements answered in CICS TS

5.1

- Over 100 customer requirements or requests for enhancements (RFEs) that have been delivered in version 5.1 of IBM CICS Transaction Server for z/OS (CICS TS).
- The following URL lists them all:
 - <http://www-01.ibm.com/support/docview.wss?uid=swg27037777>
- **RFE 24857** [Add APPEND option to PUT container command](#)
- 24678 [Add Console Journaling for CICS transactions](#)
- 20335 [Add SMF 110 monitoring records for CPU consumed by transaction on zIIP and zAAP](#)
- 20243 [Add security refresh function to CICS Transaction Server for SSL security](#)
- 20294 [Addition of message indicating release of GCD and LCD](#)
- 20236 [Allocate CICS commarea storage above the line after XCTL \(SHARE requirement SSCICS10002\)](#)
- NOTE: 5.2 requirements: <http://www-01.ibm.com/support/docview.wss?uid=swg27041548>

ABENDOC4 and DFHME0132 for DFHDU0303I when using OMEGAMON XE for CICS 5.1

- You receive an ABEND0C4 and message DFHME0132 for DFHDU0303I. This occurs when you are bringing down your CICS Transaction Server for z/OS (CICS TS) region after message DFHRM0130 Recovery manager has successfully quiesced. You are using Tivoli Omegamon XE for CICS V5.1.
- CICS is in the process of closing the transaction dump datasets and will issue message "DFHDU0303I Transaction Dump Data set DFHDMPx closed." but the KOCOME00 OCGLUE XMEOUT GLUE (Global User Exit) is called and an 0C4 abend occurs out of module DFHSUEX because Omegamon has released the module.
- Apply the PTF for Tivoli Omegamon XE for CICS V5.1 APAR [OA40598](#)

Changes to SIT parameters in CICS TS 5.1

- What changes have been made to the CICS Transaction Server for z/OS (CICS TS) V5.1 System Initialization Table (SIT) parameters and what effect will these have on your CICS regions when you upgrade?
- In previous releases, the default values for a number of SIT parameters were such that they needed to be changed immediately after installation in order to run any form of workload. Other parameters are now obsolete since they were typically not being configured correctly leading to performance issues under certain circumstances.
- See the following URL:
 - <http://www-01.ibm.com/support/docview.wss?uid=swg21599151>

New messages for IPCONN State Changes

- Currently there are no messages issued when IPCONN state changes. This makes it difficult to detect IPCONNs which maybe hanging in FRE state.
- It is also impossible to tell from the CICS log when an IPCONN was acquired and why and when it is being released.
- Subscribe to open CICS APAR PM65433

New CICS system initialization option advised to ensure smooth handling of daylight saving time (DST)

- When the z/OS system clock is set back, such as for 1 hour for Daylight Saving Time, you are advised to use this new function to automatically re-synchronize the clock in your CICS regions with the z/OS system clock. Without this, if your CICS Transaction Server for z/OS (CICS TS) regions run applications that do EXEC CICS STARTs or EXEC CICS DELAYs or EXEC CICS POSTs that specify a TIME (rather than an INTERVAL), and that time is calculated from EIBTIME plus some amount of time, then those STARTs and DELAYs and POSTs will expire immediately if the CICS time does not match the z/OS time. This can cause various problems like application loops and excessive SMF data recording that can cause the CICS region to become unresponsive.
- Synchronize the CICS time with the z/OS time immediately whenever you alter the system date or time-of-day in the MVS TOD clock while a CICS region is running. APARs PM61466 (4.2), PM52109 (4.1), and PM52172 (3.2) add a new IMMEDIATE option to the AUTORESETTIME System Initialization Parameter (SIT). If you do not have a process in place to guarantee that a manual CEMT PERFORM RESET or EXEC CICS PERFORM RESETTIME command will be done immediately after altering the MVS TOD clock, then apply the PTF for your release of CICS below and set AUTORESETTIME=IMMEDIATE to pick up the new functionality and automatically synchronize the CICS time with the z/OS time:
 - CICS TS 4.2 - PTF UK78430 for APAR PM61466
 - CICS TS 4.1 - PTF UK77263 for APAR PM52109
 - CICS TS 3.2 - PTF UK78322 for APAR PM52172

DFHAP0001 0C4 in DFHAPDM at startup when using BMC after upgrading to z/OS 1.13

- Your CICS Transaction Server for z/OS (CICS TS) region fails during initialization. You are receiving an abnormal end or program check with message DFHAP0001 abend 0C4 (abend0C4 abendAKEA) in DFHAPDM. This occurs after upgrading to z/OS V1.13. You are using BMC Software.
- You see the following message in the CICS log:
 - [DFHAP0001](#) applid An abend (code 0C4/AKEA) has occurred at offset X'FFFF' in module DFHAPDM
- Apply BMC fix BPN1655

CICS system is in a wait and not getting dispatched

- **Problem:** You are running an application that made a EZASOKET call to TCP/IP, and is waiting for a response. This call puts the CICS QR TCB into a wait. The region is not getting dispatched.
- **Cause:** The application is linked with the wrong socket module. It has been linked with the batch version EZASOKET module rather than the CICS version called EZACICAL
- **Solution:** Relink the application with the EZACICAL module to prevent MVS waits for the QR TCB.

CICS taking excessive CPU

- **Problem:** A CICS region takes up 100% of one of your engines
- **Cause:** CA Technologies TCB is in a soft loop in CICS address space. The PSW from SYSTRACE showed a loop in module CAKSCMGR
- **Solution:** CA provided fix RO36895 to resolve a soft loop problem with a control block search. Contact CA for further assistance

SQA storage creep

- **Problem:** You notice a problem with increased SQA usage your LPAR. SQA usage had grown significantly and was overflowing to CSA causing the CSA threshold to be exceeded. There is a lot of unowned SQA storage and the owners are CICS regions which are leaving behind 64 bytes of SQA every time they are recycled.
- **Cause:** Eye-catchers in the storage show the following pattern:

e.....CAS9C66e

- **Solution:** Ca Technologies CA confirmed that this was a known problem. PTF TD46632 for CA common Services resolved this problem

Average CPU time is higher when using CICS-MQ adapter with CICS TS 3.2 and higher

- **Problem:** You have upgraded to CICS Transaction Server for z/OS (CICS TS) V3.2 or later and are using the CICS-MQ adapter to communicate with Websphere MQ (WMQ). You are now seeing an increase in the CICS average CPU time. However, the CPU seconds for the entire region from the MVS type 30 SMF records does not show a significant increase.
- **Symptom:** In this case, the average CPU time went from .0015 under CICS TS V2.3 to .0022 under CICS TS V3.2. This represents a 46% increase in average CPU time. With a 46% increase in average CPU time, you expected that the total CPU time would have increased accordingly.
- **Cause:** The WebSphere MQ adapter used with releases of CICS before CICS TS V3.2 has a pool of eight private TCBs. Since they are private TCBs and not CICS managed TCBs, CICS does not capture and report the CPU time spent on those TCBs in the SMF 110 records.

Beginning with CICS TS V3.2, the CICS-MQ adapter uses CICS managed TCBs and CICS can now report the time spent on the TCB in the CICS SMF 110 records. As the MVS SMF Type 30 records show, the total CPU consumption for the region is nearly the same in both releases. However, the average CPU time shows a marked increase because it is now reporting the time spent on the CICS-MQ adapter TCBs.

- **Resolution:** Expect the average CPU time to be higher when using the CICS-MQ adapter with CICS TS V3.2 and higher. CICS is working as designed.

New CICS TS 4.1 Abend AFDK



- AFDK
 - A file control request was made against a NSR file while transaction isolation was active for the task. Using NSR files with transaction isolation active is not supported. The TRANISO system initialization parameter is YES and the transaction definition has ISOLATE set to YES.
- CICS Manuals at all supported releases indicate:
 - VSAM nonshared resources (NSR) are not supported for transactions that use transaction isolation. You should specify ISOLATE(NO) when you define transactions that access VSAM files using NSR.
- NOTE: CICS APAR PM07304 / PTF UK55020 will allow READONLY Files to use NSR and Transaction Isolation.



CICS Technical Exchanges

- CICS Technical Exchanges can be found at the following URL:

http://www-947.ibm.com/support/entry/portal/previous_tech_exchanges/software/other_software/cics_transaction_server

Sample Titles:

[Sizing and Analyzing JVM Memory Usage under CICS TS for z/OS](#)

[CPSM API Requests - Hangs and Timeouts](#)

[CICS Web services structure and debugging](#)

[CICS Storage 102 - Debugging CICS Short on Storage Conditions](#)

[Understanding Urimaps, Pipelines, and Webservices for CICS](#)

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.
- From this document you can select DSR for CICS Transaction Server (CICS TS) for:
 - V4.2
 - V4.1
 - V3.2
 - V3.1
 - CICS TS for VSE/ESA V1.1.1
- **Website:** <http://www.ibm.com/support/docview.wss?uid=swg27006382>

Finding CICS Information Centers

- How do you find CICS product documentation for CICS Transaction Server for z/OS (CICS TS) and the CICS tools?
- The best place to find CICS product documentation is to use the CICS TS information centers. Documentation for most of the CICS Tools is also included in the CICS TS information centers. Each release of CICS has its own information center that you can view on the www.ibm.com Web site or install on a workstation or server.
- Here is a link to an item that has all the Information Centers online, and directions to download to a workstation:
 - <http://www.ibm.com/support/docview.wss?uid=swg21200934>

IBM Knowledge Center will be generally available soon

- IBM Knowledge Center at:
 - www.ibm.com/support/knowledgecenter/
- Brings IBM's technical publications together in a single location that will replace over 800 individual IBM Information Centers.

Fix lists for CICS TS

- Fix list documents summarize all of the APARs and PTFs for a particular product Version
- Fixes by version document 7008833 contains a link to the available Fix list documents
- Direct URL:
 - <http://www.ibm.com/support/docview.wss?uid=swg27008833>

Preventive Service Planning

- CICS Document 1231874 has a listing of all PSP buckets for CICS Transaction Server and all CICS Tools
- Direct URL:
 - <http://www.ibm.com/support/docview.wss?uid=swg21231874>

New Function APARs

- Flashes for all CICS New Function (NF) APARs are posted to CICS Support page and included in MySupport email
- CICS item 1238275 has a listing of links to all New Function APARs for CICS Transaction Server and all CICS Tools
- Direct URL:
 - <http://www.ibm.com/support/docview.wss?uid=swg21238275>

Announcement Letters for CICS

- CICS item 1227090 contains links to all Announcement letters for CICS Transaction Server and all CICS Tools
- Can be linked to from Announcement Letters on the CICS Support page
- Direct URL:
 - <http://www.ibm.com/support/docview.wss?uid=swg21227090>

IBM Software Support Lifecycle

You want to know when the end of service is for any IBM Software release.

You can find the End of Service dates by navigating to the following URL:

http://www.ibm.com/software/support/lifecycle/index_c.html

CICS Transaction Server for z/OS V2.2 5697-E93	25 Jan 2002	30 Apr 2008
CICS Transaction Server for z/OS V2.3 5697-E93	19 Dec 2003	30 Sep 2009
CICS Transaction Server for z/OS V3.1 5655-M15	25 Mar 2005	
CICS Transaction Server for z/OS V3.2 5655-M15	29 Jun 2007	

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
- See the following document for all product or maintenance ordering concerns

<http://www.ibm.com/support/docview.wss?uid=swg21049360>

Must Gather Documentation

MustGather documents aid in problem determination and save time resolving problem management records (PMRs). These documents are located on the CICS® Web site and contain instructions about what documentation to gather for specific problems.

Collecting MustGather data early, even before opening a PMR, helps IBM® Support quickly determine if:

1. Symptoms match known problems (rediscovery).
2. There is a non-defect problem that can be identified and resolved.
3. There is a defect that identifies a workaround to reduce severity.
4. Locating root cause can speed development of a code fix.

You can find the MustGather – Read first document on the CICS Home Page or go directly to:

<http://www.ibm.com/support/docview.wss?uid=swg21208053>

HIPER and PE APARs

- CICS DCF item 1182322 will dynamically show all PE and HIPER maintenance for all supported releases of CICS and CPSM
- You can find this item by going directly to:
 - <http://www.ibm.com/support/docview.wss?uid=swg21182322>

Upgrading information for CICS when changing release of CICS, z/OS, or DB2

- CICS Document 1207399 may be used to see if there are Upgrade Issues with CICS and CPSM.
- You can find this item by going directly to:
 - <http://www.ibm.com/support/docview.wss?uid=swg21207399>

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 670 corresponds to CICS Transaction Server for z/OS (CICS TS) V4.2?
- Reference item:

<http://www-01.ibm.com/support/docview.wss?uid=swg21509464>

Additional Product Resources

- CICS Transaction Server support Web page
[http://www.ibm.com/support/entry/portal/Overview/Software/Other Software/CICS Transaction Server](http://www.ibm.com/support/entry/portal/Overview/Software/Other_Software/CICS_Transaction_Server)
- IBM_CICS technical support news on Twitter
<http://www.ibm.com/support/docview.wss?uid=swg21384915>
- WebSphere and CICS Support Blog
<http://www.ibm.com/developerworks/mydeveloperworks/blogs/aimsupport/>
- WebSphere and CICS Support on Facebook (beta)
<http://www.facebook.com/pages/WebSphere-and-CICS-Support-BETA/137468732967250>
- Technical support emails with My Notifications subscription
<http://www.ibm.com/software/support/einfo.html>
- Webcasts for CICS products
<http://www.ibm.com/support/docview.wss?uid=swg27007244>
- IBM Education Assistant modules
<http://publib.boulder.ibm.com/infocenter/ieduasst/stgv1r0/index.jsp>