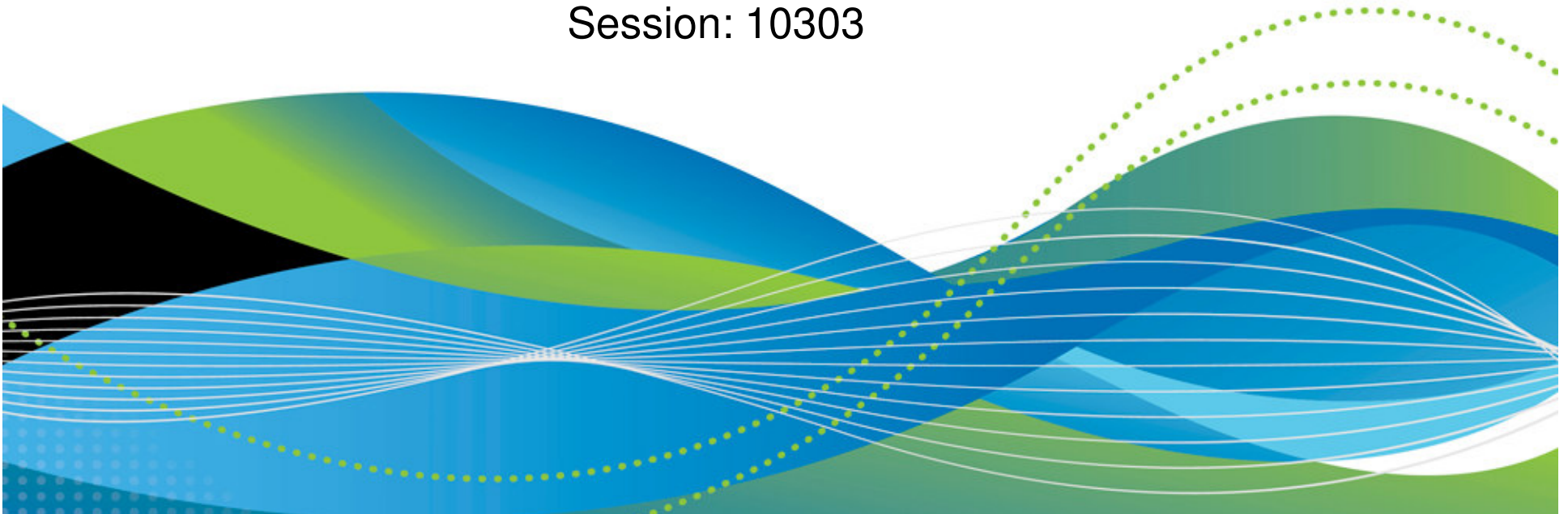


CICS Nuts Bolts and Gotchas

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IXG231 and DFHLG0508 for DFHJ01 when starting CICS



- **Problem:** You receive message IXG231 and DFHLG0508 for DFHJ01 when you are try to bring up a CICS Transaction Server for z/OS (CICS TS) region.
- **Cause:** System initialization table (SIT) overrides of CSDRECOV=ALL and CSDFRLOG=1 were set. With these recovery options for the CSD, CICS will automatically try to connect to DFHJ01.
- **Solution:** Change CSDRECOV to BACKOUTONLY or NONE in the SIT, or define DFHJ01 (usually in the form of userid.applid.DFHJ01) if you want forward recovery for the CSD.

SYNCPPOINT rollback is not working for ESDS files when using DFH\$FCLD



- **Problem:** Your CICS application program writes to an ESDS dataset, which is defined to CICS as BACKOUTONLY. When a program issues a SYNCPPOINT rollback, the rollback does not occur. You set up the supplied sample DFH\$FCLD to run at exit point XFCLDEL. But, backout is still not occurring.
- **Cause:** For an ESDS, the record will not be physically deleted from the dataset. This is normal. DFH\$FCLD, or any other user written exit, only marks the record as 'logically deleted'. DFH\$FCLD does this by inserting a FF in the log record, which is then rewritten to the ESDS file. So, the record is not deleted, it is marked as logically deleted.
- **Solution:** Write a batch program to remove all logically deleted ESDS records.

CICS system is in a wait and not getting dispatched



- **Problem:** You are running an application that made a EZASOCKET 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 EZASOCKET module rather than the CICS version called EZACICAL
- **Solution:** Relink the application with the EZACICAL module to prevent MVS waits for the QR TCB.

Determining if the CSFE storage violation trap for CICS TS is active



- **Problem:** How do you confirm that the CSFE storage violation trap is running in your CICS Transaction Server for z/OS (CICS TS) region?
- **Solution:** There is no easy way to verify that the storage violation trap is running.
- When you enter **CSFE DEBUG,CHKSTSK=CURRENT** the DFHFEP program sets the CSATSKCR bit on in field CSATRMF5 at offset x'88' in the CICS common systems area (CSA) control block and then simply returns. The bit is checked when an EXEC CICS command is issued or when a trace entry is about to be written.

You can take a dump and check the CSA for the CSATRMF5 bit being set on. CSATRMF5 is 1 byte and CSATSKCR is bit 2 (.1..) x'40'.

Alternatively, you could display CSATRMF5 field in the CSA with a Monitor. A value of x'00' would indicate that the trap is off while x'40' would indicate that the trap is on.

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

DFHXS0001 Abend code 378 AKEX occurred at offset 12D8 in module DFHXSAD



- **Problem:** You are running CICS Transaction Server for z/OS using CA Top Secret for security. You receive error message DFHXS0001 An abend (code 378/AKEX) has occurred at offset X'12D8' in module DFHXSAD.
- Apply CA Top Secret fix RO04147. The fix requires a recycle of Top Secret and the CICS regions.

A03 at CICS shutdown when using Fault Analyzer



- **Problem:** After upgrading your operating system, CICS shutdown now receives an abendA03. You are using Fault Analyzer.
- **Cause:** The abendA03 occurs due to a Fault Analyzer TCB that has not detached itself correctly.
- **Solution:** Add Fault Analyzer program IDIPLT to your shutdown PLT.

DFHDU0207I Transaction Dumps are being suppressed by XDUREQ



- **Problem:** CICS is not producing Transaction Dumps. Message DFHDU0207I indicates that XDUREQ user exit is suppressing both transaction and system dumps. You would like to know how to disable the user exit programs at exit point XDUREQ. In this particular case, the dump is for an abend ASRA.
- **Cause:** User exit program at exit point XDUREQ is suppressing the transaction dumps.
- **Solution:** Change the user exit program so it does not suppress the dumps or inactivate the programs at exit point XDUREQ using the steps below:

Enter **CECI INQUIRE EXITPROGRAM EXIT(XDUREQ) START** to start the browse so you can determine all of the exit programs defined at exit point XDUREQ. This returns:
EXit('XDUREQ ') RESPONSE: NORMAL

Enter **CECI INQ EXITPROGRAM NEXT** until RESPONSE: END to display the exit programs defined for exit point XDUREQ. The number of programs returned will depend on the number of programs you have enabled at the exit point. For example, this would return the following if PROGRAM1 and PROGRAM2 are enabled:
ENTRYName('PROGRAM1') RESPONSE: NORMAL
ENTRYName('PROGRAM2') RESPONSE: NORMAL
ENTRYName(' ') RESPONSE: END

Enter **CECI INQ EXITPROGRAM END** to end the browse

Enter **CECI [DISABLE PROGRAM](#)(PROGRAMx) EXIT(XDUREQ)** for each program returned above to disable the program.

After getting your dumps you may want to re-activate the exit programs. To do this, you can enter **CECI [ENABLE PROGRAM](#)('PROGRAMx') EXIT('XDUREQ') START** for each program you want to enable.

NEWCOPY and PHASEIN do not bring in a new version of CICS Java program



- **Problem:** You make changes to your Java program and recompile it. Then you enter CEMT SET PROGRAM(java-program) with the NEWCOPY or PHASEIN options and receive a response of NORMAL. The next time you run your Java program you expect CICS to use the new version. However, CICS continues to use the version that does not contain your latest changes.
- **Cause:** NEWCOPY and PHASEIN are not valid for Java programs, and are ignored if specified. The command returns NORMAL because it completed without error. This is documented as follows in the CICS TS V4.2 information center under [CEMT SET PROGRAM](#):

You cannot specify NEWCOPY for a program specified with the HOLD option or for a Java program that runs in a JVM. Use the PERFORM JVMPOOL PHASEOUT command to refresh Java programs that run in a pooled JVM. Disable and enable the JVMSERVER resource to refresh a Java program that runs in a JVM server.

You cannot specify PHASEIN for a program specified with the HOLD option or for a Java program that runs in a JVM. Use the PERFORM JVMPOOL PHASEOUT command to refresh Java programs that run in a pooled JVM. Disable and enable the JVMSERVER resource to refresh a Java program that runs in a JVM server

- **Solution:** If using CICS Transaction Server for z/OS (CICS TS) V3.1, use [CEMT SET JVMPOOL PHASEOUT](#) to pull in the newest version of your Java program. This will also delete the Java Virtual Machines (JVM) when the task using each JVM is no longer dependent on it. The next time you enter your transaction, a new JVM will be built and it will use the new version of your program.

If using CICS TS 3.2 and above with pooled JVMs, enter [CEMT PERFORM JVMPOOL PHASEOUT](#). Afterwards, when new JVMs are started they will run the new version of the program.

If using CICS TS 4.2 with JVM servers, enter [CEMT SET JVMSERVER\(jvmserver\) DISABLED](#) then ENABLED to disable and enable the [JVMSERVER](#) resource that the Java program uses.

- **NOTE:** CEMT SET JVMPOOL Phaseout, Purge, and Forcepurge functions are deprecated in CICS TS V3.2. That is why you should use the corresponding functions of the PERFORM JVMPOOL command when using CICS TS V3.2 and above.

Note that CICS TS V3.2 supports Java V5. If using [the shared class cache](#), a PHASEOUT is not needed with Java V5 onwards. Any changed classes are automatically phased in to the cache as they are used.

ABEND0C4 and system dumps generated when closing CICS files from batch after upgrading z/OS

- **Problem:** You are receiving abend0C4 errors when running with the CA Technologies MIM product. The system dumps occur when you run a batch job to close files and you have recently upgraded from z/OS V1.10 to V1.12. You might see MIM messages MBCB021 and MBCB002.
- **Cause:** Missing fix for MIM product. The ABEND0C4 is occurring within module MIMETF56
- **Solution:** Contact CA Technologies for the fix to MIM. APAR number RO30474

DFHDS0002 A severe error code 0204 has occurred in DFHDSTCB

- **Problem:** You are receiving a DFHDS0002 code X'0204' in module DFHDSTCB and you are running with Xpediter/CICS.
- **Cause:** The Xpediter/CICS parameter CICSOTE was set to NO.
- **Solution:** Change the Xpediter CICSOTE parameter to YES.

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.

Compatibility of Dynamic Scripting Feature Pack with CICS TS 4.2



- **Question:** Is the existing CICS Transaction Server for z/OS (CICS TS) V4.1 Feature Pack for Dynamic Scripting compatible with CICS TS V4.2?
- **Answer:** No, the CICS TS V4.1 Feature Pack for Dynamic Scripting is not compatible with CICS TS 4.2 because this feature pack has environment variables set for using the 31bit JVM and CICS TS 4.2 only uses a 64bit JVM.

Do ***NOT*** attempt to deploy the existing Dynamic Scripting Feature Pack into your CICS TS V4.2 environment.

You must use CICS Transaction Server Feature Pack for Dynamic Scripting V1.1 with CICS TS V4.2 and CICS Transaction Server Feature Pack for Dynamic Scripting V1.0 with CICS TS V4.1.

DFHDB8222 Connection from CICS TS 4.2 to IMS fails. DBCTL return code is 36

- **Problem:** 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.
- **Cause:** IMS is not recognizing the new parameters being passed by CICS in the participant adapter parameter list (PAPL).
- **Resolution:** Apply the required PTF applicable to your IMS release:
 - IMS V12 New function - PM31420 (PTF not yet available). If you are in the quality partnership program (QPP), you still must install this PTF because the new function is not part of the IMS base code.
 - IMS V11 toleration only - PM31729 (PTF UK67278)
 - IMS V10 toleration only - PM31730 (PTF UK67279)

ESDS AUTOJOURNAL WRITE-ADD-COMPLETE RECORDS OUT OF RBA SEQUENCE

- Files have been defined with JNLADD as AFTER. Currently CICS does not obtain a write lock around the calls to VSAM and the LG domain, and hence they are not treated as a serialized operation. This allows for races between tasks and the potential for occasional autojournal after images to be written in opposing order within a log block.
 - On a busy system, it is possible for CICS tasks to interleave between calls to write to a non-recoverable ESDS file, and the subsequent calls to journal the write add complete autojournal log record for the write operation. This can lead to the ESDS RBAs being autojournalled out of the order in which records were written to the file.
 - DFHFCVS has been changed to acquire the ESDS write lock enq for the duration of the request to write to VSAM and then journal the write-add-complete autojournal record. This matches the existing behavior for write-add journalling and recovery (backout) logging.
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- APAR PM39961 - PTF UK69193 - CICS TS V3.2
 - APAR PM39862 - PTF UK69390 - CICS TS V4.1
 - APAR PM42977 - PTF UK70482 - CICS TS V4.2

DFHFC0001 ABEND202 IN DFHFCVR WHEN RUNNING FILE CONTROL THREADSAFE

- ABEND202 issued by IEAVEPST when running CICS File Control Threadsafe and Transaction Isolation. CICS makes the call to VSAM on an L8 TCB in SUBSPACE Mode and at the same time the QR TCB goes into PARTITION_EXIT and issues a SVC WAIT to z/OS.
- When the ECB for the VSAM request is posted CICS will also issue POST macro to z/OS for the WAKEUP ECB in the list previously passed. This is done on the L8 TCB in SUBSPACE Mode and the abend202 is issued when z/OS turns off wait bits in the list of TCBs that is not in the same SUBSPACE.
- APAR PM37081 / R600 UK71013 / R700 UK71014

AD2R abend after upgrading to DB2 9.1 when running CICS TS 4.1



- Problem: After you upgrade to DB2 V9.1 or apply maintenance to CICS Transaction Server for z/OS (CICS TS) V4.1, transactions in your CICS TS V4.1 region start to fail with an abend AD2R (abendAD2R)
 - The CICS exception trace indicates that the DB2 thread abended with an 0C4 Reason 0003EB60 (RSN3EB60)
- Solution: Apply PTF UK60422 for DB2 V9.1 APAR [PM20489](#). This APAR was opened to address an abend 0C4 in DSNMLTOK at offset 4 and will fix this problem. You should apply this PTF before upgrading to DB2 V9.1 if running CICS TS V4.1.

0C4 in DFHFCVR and IAMACCKS while running with TRANISO



- Problem: You are running CICS Transaction Server for z/OS (CICS TS) V3.1 with transaction isolation active and you receive repeated 0C4 abends in DFHFCVR when using IAM. You might also receive message DFHRM0002
- Symptom: Abend0C4 reported in DFHFCVR, [DFHRM0002](#), and Abend0C4 in IAMACCKS while running in Subspace
- Solution: Apply IAM fixes P-90.0024 , P-90.0023 , and P-90.0031 from [Innovation Data Processing](#)
 - If you are not able to apply the above fixes immediately, you can circumvent the problem in one of two ways:
 - Change TRANISO to NO to turn off transaction isolation in the CICS region until the maintenance is applied
 - Change the IAM global option to INDEXSPACE=ALL so IAM will not use 64 bit storage for the index

WHEN THE AGE OF A JVM EXCEEDS 49.7 DAYS AN S0C9 ABEND IN DFHSJIS OCCURS

- Problem: When the age of a JVM gets to 49.7 days, there will be an abend0C9 on the CVD instruction because the number of milli-seconds exceeds the number that will fit into the 4 bytes reserved.
- Solution: APAR PM31333 - PTF UK66058 CICS TS V4.1
- APAR PM30878 - PTF UK66020 CICS TS V3.2

DFHAP0001 ABEND0C4 INCORRECT VERSION OF DFHMLTT USED FROM LPA

- Problem: CICS TS 3.1 and TS CICS 4.1 are on the same LPAR. An MQGET attempt to an MQ queue on CICS TS 3.1 with LPA=NO fails with an ASRA and CSQCTRUE fails with an 0C4 ABEND at offset x'FFFFFFFF'. A subsequent attempt leaves the region hanging
 - DFHMLTT is included in CICS TS 4.1 modules eligible to be used from the MVS link pack area. In this case, the module is moved into the LPA and CICS TS 3.1 is also in the same LPAR
 - When CICS TS 3.1 starts with LPA=NO and an MQGET is attempted to one of its MQ queues, CSQALOC identifies CICS is present and attempts an MVS link to DFHMLTT, which is successful, except DFHMLTT is not compatible with CICS TS 3.1 and the application fails with an ABEND 0C4
- Apply PTF R600 UK61544

ABILITY TO OVERRIDE RLS CO-EXISTENCE PROTECTION FOR CICS

- VSAM will in general prevent simultaneous access to a data set in both RLS and non-RLS modes. However, a readonly non-RLS file can be opened if it is shareoptions 2 while RLS also has the dataset open.
- If a dataset is open to RLS within CICS, it will currently be rejected with DFHFC0512 to ensure applications get consistent views of the same underlying dataset.
- This apar will allow the user to override this co-existence protection for CICS and allow a non-RLS readonly open of a dataset that is opened in RLS mode if it is defined with shareoptions 2
- APAR PM12835 (R600) - PTF UK65921

CICS TCP/IP port hangs until CICS is recycled after applying PTFs for OMVS APAR OA29566

- You are using CICS Transaction Server for z/OS (CICS TS) and TCP/IP. Your CICS TCP/IP port hangs and is not responding. There are no errors but all work on that PORT ceases. You have to bring CICS down and back up to resolve the problem. This occurs after you apply OMVS PTF UA51856 (z/OS V1.9), UA51857 (z/OS V1.10), or UA51830 (z/OS V1.11) for APAR OA29566.
- OMVS APAR [OA32088](#) fixes this problem. Refer to the APAR for PTFs needed for your release of z/OS.

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.

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:
 - z/OS V4.1
 - V3.2
 - V3.1
 - V2.3
 - 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>

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%20Software/CICS%20Transaction%20Server)
- 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>