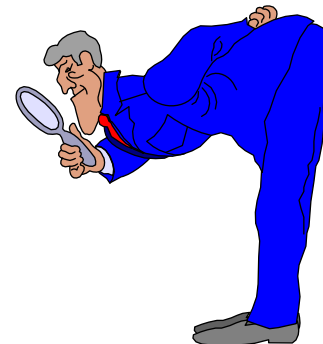# Bit Bucket X'29'

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SHARE 117
Session 09677
Orlando, FL
12 Aug 2011

What's In a (Data Set) Name?

(Ed Jaffe)

APAR OA35437

- **A generic request to the Catalog Search Interface (CSI) would occasionally return a data set that was in the process of being renamed.**

- **Instead of serializing to make RENAME appear as an atomic operation, someone at IBM decided to make CSI fail:**

```
Symptom ...... IN INCORROUT        Status ........... CLOSED  PER
Severity .................. 3      Date Closed ......... 11/02/11
Component .......... 5695DF105     Duplicate of ........
Reported Release ........ B10      Fixed Release ........... 999
Component Name ICF CATALOG & I     Special Notice
Current Target Date ..11/04/30     Flags

PTF List:
Release B10    : UA59088 available 11/03/12 (F103 )
Release C10    : UA59089 available 11/03/12 (F103 )

ERROR DESCRIPTION:
A new 100-10 return/reason from catalog will be issued when a
generic request (CSI, ISPF 3.4, LISTCAT LEVEL) encounters a
catalog entry that is the target of an in-progress rename
request.   The error indicates that the rename has not completed
and there is a chance that though the data set exists in the
catalog, it has not yet been defined to the volume.

LOCAL FIX:
Once encountered,  resubmit the generic locate request
```

APAR OA35437

- A change of this type is often communicated to IBM and ISV developers who might be existing callers of the service.

- As of this writing, there is still no Interface Change Notification (ICN) for ISVs. Apparently some IBM developers didn't get the memo either...

- We received an internal trouble report complaining that our RMM volume movement reports, which are emailed by z/OS periodically, were not being received.

- A few days later our RMM journal filled up and had to be dealt with. (We now have an automated procedure to handle this condition.)

- The next day we ran out of scratch tapes at which point this became a high priority issue!

APAR OA35437

- Turns out that back in February 2011 we had a file that somehow got the rename-in-progress bit turned on in the catalog. (What exactly happened is a mystery because we don't maintains logs back that far.)
- <u>Nobody ever noticed and nothing bad ever happened</u>.
- After APAR OA35437, RMM's EDGHSKP began failing in 'CATSYNCH'. A U2201 dump was created and the STC ended with RC=12. No housekeeping was done.

```
EDG2237E CATALOG SEARCH INTERFACE REQUEST FAILED RETURN CODE 100 REASON
CODE 10 MODULE ID FS FOR DATA SET UNKNOWN
EDG2237E CONT:-                         IN CATALOG CATALOG.SYSCAT01.VMVSSY1
EDG2303E DFSMSrmm INVENTORY MANAGEMENT TASK ABEND U2201
EDG6901I UTILITY EDGHSKP COMPLETED WITH RETURN CODE 12
```

- CSI RC100 RSN10 is not documented for z/OS 1.12.
- The problem data set is not listed in msgEDG2237E.
- F CATALOG,DUMPON(100,010,**) will generate an SVC dump, but the problem data set name is not obvious, even for an experienced dump reader.

APAR OA35437

- **RC100 RSN10 is documented for z/OS 1.13 only.**
- **This book can be accessed by the ordinary public via: http://publibz.boulder.ibm.com/epubs/pdf/iea2m6c0.pdf**
- **<sarcasm>I LOVE this Programmer Response.</sarcasm>**
- **Do they really expect a program issuing a generic CSI request to implement specific error recovery for this one return code to determine if a pending ALTER NEWNAME request has completed? How exactly is this done anyway? And, what are you supposed to do if it hasn't yet completed? Fail? Wait? Try again?**
- **Most programs will either stop on the error or wait for a short time and retry the generic CSI request.**

RETURN CODE 100

Explanation: Generic locate error.

Reason Code	Description
10	Explanation: The data set name is indicated as a NEWNAME in an ALTER NEWNAME request that has not completed.
	Programmer Response: Determine if the ALTER NEWNAME request has completed. If so, run the request again to get the correct information.

APAR OA35437

- **DIAGNOSE/EXAMINE will not flag these entries.**
- **ISPF 3.4 returns 'List incomplete' error with 'garbage' in the volume field next to the problem data set name—which will always be the last one listed.**
  - I don't have a screen shot because I didn't think to take one while dealing with this crisis.
- **The APAR states that the error may be reported by LISTCAT as <u>RC10</u>, RSN10. Nice! ☹**
- **All attempts to manage the problem data set with DELETE, DELETE NOSCR, RENAME etc. will fail with CATALOG error RC130 or RC90.**
- **The only thing you can do is to use IBM's unsupported VVDSFIX tool (see Bit Bucket x'27' for details).**
  - The DELBCSR command removes the problem BCS record.
  - Issue the F CATALOG,CLOSE(*catalog.data.set.name*) system command afterward to flush any residual cache entries.

APAR OA35437

- Once the problem data set was removed, ISPF 3.4 produced a complete list of data sets under the 'problem' HLQ with no error message.
- RMM EDGHSKP CATSYNCH processing completed normally again. We got our scratch tapes back! ☺
- Many ISV and IBM products—even 'freeware' on the CBT—use the Catalog Search Interface.
- These products are now exposed and have the potential to fail if you have rename-in-progress data sets in any of your catalogs.
- A failure can be intermittent during normal RENAME processing if a product is not programmed to wait and then perform a retry.
- Retry can result in a loop if the rename-in-progress bit is never removed—as was the case in our situation.

APAR OA35437: Bad Things Are Happening Already

- **After our experience, the following posts from Peter Hunkeler arrived on IBM-MAIN:**

```
Date:            Wed, 20 Jul 2011 09:30:01 +0200

After activting z/OS V1.12 RSU1106, an STC started to loop every now and
then. It turned out there was a bug in our assembler code reading data
set entries from the catalog using IGGCSI00. The code did not correctly
handle the case when IGGCSI00 marked an entry in the workarea to be
in error. Obviously, this did not happen for the last 10 years as this
is about the age of this piece of code.
```

```
Date:            Tue, 26 Jul 2011 09:18:53 +0200

For the records: Here is some information about the new yet
undocumented reason code returned by IGGCSI00 (citation):

"The new 100-10 return/reason code from catalog was introduced by
APAR OA35437 and will be issued when a generic request (CSI,
ISPF 3.4, LISTCAT LEVEL) encounters a catalog entry that is the
target of an in-progress rename request.  The error indicates that
the rename has not completed and there is a chance that though the
data set exists in the catalog, it has not yet been defined to
the volume."
```

APAR OA36138

- **IBM took an APAR (closed FIN) to allow privileged users, authorized via new SAF resource, to delete a data set with the rename-in-progress bit on.**

- **This should allow you to get rid of these entries without using VVDSFIX, but does nothing to prevent CSI callers from failing or looping until you do.**

```
APAR Identifier ...... OA36138       Last Changed ........ 11/04/21
RACF FACILITY CLASS FOR DELETING RENAME-IN-PROGRESS ENTRIES

Symptom ...... NF NEWFUNCTION         Status ........... CLOSED  FIN
Severity .................. 4         Date Closed ......... 11/04/21
Component .......... 5695DF105        Duplicate of ........
Reported Release ........ C10         Fixed Release ...........
Component Name ICF CATALOG & I        Special Notice
Current Target Date ..11/05/31        Flags
```

APAR OA36379

- **IBM took an APAR to clean up the 'garbage' displayed by the ISPF Data Set Utility.**

```
APAR Identifier ...... OA36379      Last Changed ........ 11/07/06
ISPF DATA SET LIST UTILITY CAN PRODUCE GARBLED OUTPUT IF THERE
IS A CATALOG ERROR.

Symptom ...... IN INCORROUT          Status ........... CLOSED  PER
Severity .................. 2        Date Closed ......... 11/06/22
Component .......... 565504202       Duplicate of ........
Reported Release ......... J02       Fixed Release ........... 999
Component Name ISPF Z/OS PDF&S       Special Notice
Current Target Date ..11/07/20       Flags

PTF List:
Release I02   : UA61049 available 11/07/06 (1000 )
Release I11   : UA61052 available 11/07/06 (1000 )
Release I14   : UA61053 available 11/07/06 (1000 )
Release I15   : UA61054 available 11/07/06 (1000 )
Release I16   : UA61055 available 11/07/06 (1000 )
Release J02   : UA61050 available 11/07/06 (1000 )
Release J11   : UA61056 available 11/07/06 (1000 )
Release J14   : UA61057 available 11/07/06 (1000 )
Release J15   : UA61058 available 11/07/06 (1000 )
Release J16   : UA61059 available 11/07/06 (1000 )
Release M02   : UA61051 available 11/07/06 (1000 )
Release M11   : UA61060 available 11/07/06 (1000 )
Release M14   : UA61061 available 11/07/06 (1000 )
Release M15   : UA61062 available 11/07/06 (1000 )
Release M16   : UA61063 available 11/07/06 (1000 )
```

Presenting a Console Presentation Presentation

(Ed Jaffe)

Default Console Message Presentation

- **Default console message attributes haven't changed much since the 1970s.**

- **Most everything on the console looks the same: green, green, green, green, green, white, red.**

- **(Years ago, someone did take "bold" steps to make the OOL labels turquoise and the warning area blink. I'm sure we're all very impressed.)**

Type	Attributes	Meaning
ENTRYARA	(G,N,N)	Entry area
EVETACTN	(G,N,N)	Eventual action
GENMSG	(G,N,N)	General system
OOLDATA	(G,N,N)	Out-of-line data
PPMSG	(G,N,N)	Problem program messages
IMEDACTN	(W,N,H)	Immediate action
URGATTN	(R,N,H)	Urgent attention

Default Console Message Presentation

Console Message Presentation Is Important

- MPF provides the ability to differentiate console messages using 3270 display technology developed in the 1980s. <u>The 1980s</u>!

- Console message presentation is not just for people that look at MCS/SMCS consoles. Advanced software products have for some time allowed users to apply console message presentation attributes while browsing the log in a TSO/ISPF session.

- Using color and highlighting to differentiate messages provides better heuristics and understanding.

- But what choices make sense? Is there a standard? What can we use as guide for our own environments?

MSOPS Modern Console Message Presentation

- **As part of its Msys for Operations (MSOPS) initiative, IBM developed new recommendations for 3270 console presentation.**

- **All messages and console areas are differentiated from each other by color—highly beneficial.**

- **IBM used reverse video for improved readability at distance.**

- **It's not a bad idea to upgrade your MPFLSTxx .MSGCOLR settings to take advantage of extended highlighting and all seven colors on "modern" 3270s, even if you choose a standard other than this IBM-developed scheme:**

```
.MSGCOLR URGATTN(R,R),IMEDACTN(B,R),EVETACTN(P,R)
.MSGCOLR GENMSG(P,R),PPMSG(Y,R),SELPEN(B,R)
.MSGCOLR INSTRERR(W,R),ENTRYARA(T,R),WARNLGEN(B,R)
.MSGCOLR WARNRGEN(B,R),WARNRURG(R,R),OOLCNTL(T,R)
.MSGCOLR OOLLABEL(T,R),OOLDATA(G,R)
```

MSOPS Modern Console Message Presentation

MSOPS Console Presentation Attributes Being Surfaced By an OPERLOG Browser

You Must Be A Mainframer If…

(Ed Jaffe)

You Must Be A Mainframer If...

- **Lionel Dyck posted a link to this great presentation at http://linuxvm.org/present/SHARE105/S5007jeb.pdf which is simply a PPT converted from the text found at http://www.grnscrn.com/bigblue.htm, compiled by Darryl Van Nort (IBM) in August 2005.**
- **See how many you know. There are 216 items on the list! Here are the first 14:**

1. When someone mentions green card, you don't think of immigration
2. You understand the significance of version 3.8
3. You think of DASD not DISK
4. You know what a disk pack is
5. When someone mentions RENT you don't think of housing expense
6. You know that WAD has nothing to do with gum
7. You think that fixed font, green on black is an ideal programming environment
8. You know where "pluckin' and shuckin'" really came from (and wish you didn't)
9. You know that the head of string is not an HR position
10. You think of DASD when someone mentions string
11. You don't trust any machine you can lift or step over
12. You remember when your computer had an air bag in it (and a compressor to inflate it)
13. You understand how a computer can work better with 30 gallons of water in it
14. You know that a functional recovery routine is not physical therapy

Duplicity

(Tom Conley)

Simultaneous TSO Logons to Multiple LPARs in Sysplex

- This is an update to this topic, first presented at SHARE 105 in Boston, 2005, Bit Bucket x'1E'

- JES2 V1R4 removed restriction preventing same TSO userid from logging on to more than one system in a Sysplex or shared MAS

- Bit Bucket X'1E' discussed a number of issues in ISPF, JES2, and SDSF which prevented full exploitation of this new feature

- Lionel Dyck published an article in May 2004 issue of Technical Support discussing this feature and showing how to implement it

- There have been a lot of changes since then...

Simultaneous TSO Logons to Multiple LPARs in Sysplex

- Lionel's article shows following steps to implement multiple logon:
  1. Ensure that SYSIKJUA ENQ is SYSTEM, not SYSTEMS, and not in serialization product exclude list
  2. Code and install ISPF exit 16 to provide LPAR-unique dataset names for temporary datasets (TEMP, CNTL, LIST, LOG)
  3. Choose between one of three profile strategies, a non-shared profile unique to each LPAR, a temp profile dataset with primed members, and lastly, a shared profile dataset for all systems
  4. If choosing shared profile dataset, then change SPFEDIT ENQ from SCOPE=SYSTEMS to SCOPE=SYSTEM for datasets matching profile name (e.g. *.ISPF.PROFILE)

- With a shared profile dataset, last system to update profile "wins", which may not be optimal for some sites

- With non-shared and temporary profile datasets, there is potential data loss due to EDIT RECOVERY, since the ISPF profile stores recovery data in member ISREDRT

Simultaneous TSO Logons to Multiple LPARs in Sysplex

- In a "non-shared" profile environment, user on SYSA edits a dataset, but times out

- A few hours later, user logs on to SYSB and edits same dataset

- Due to the "non-shared" profile, SYSB does not detect that there is a recovery copy of dataset out there, the ISREDRT recover member is in SYSA profile dataset

- User on SYSB saves dataset, logs on to SYSA, recovers the dataset, saves it, and updates from SYSB are lost

- Depending on the extent of the data recovery, this problem can be anywhere from a minor nuisance to a major hosing

Simultaneous TSO Logons to Multiple LPARs in Sysplex

- In z/OS V1R9, ISPF development released shared profile support

- Shared profile modifies ENQ mechanism for profile dataset to allow multiple systems to safely share and update profile dataset; ISPF used to ENQ EXCL while profile dataset was open, but now it opens SHR when reading profile member into storage, and EXCL when updates are written back to profile member

- ISPF Configuration Dialog ISPCCONF is used to enable shared profile support and set shared profile options

- For more detailed information on ISPCCONF, please grab http://home.roadrunner.com/~pinncons/SHARE - Configuring ISPF for Fun and Profit.pdf

- ISPF command SHRPROF is used to provide control of shared profile support for an active ISPF session (shared profile support must be enabled for SHRPROF to work)

- To enable shared profile support, enter ISPCCONF option 1.4 to modify ISPF Site-Wide Defaults in the ISPF keyword file

Simultaneous TSO Logons to Multiple LPARs in Sysplex

```
                    Modify ISPF Sitewide Defaults            End of data
Command ===>
                                                   More:    -

Temporary Data Sets
  Additional Qualifier . . SYS&SYSNAME


ISPF Multi-logon Profile Options
  Enter "/" to select option
  /  Multi-logon Profile Sharing
  /  Prompt for Profile ENQ Lockout     ENQ Lock Wait  . . . . . 1000
     Reset Shared Profile Settings      ENQ Lock Retry Count . . 1


  System Profile conflicts              Reference List conflicts
  1  1. Keep                            1  1. Keep
     2. Discard                            2. Discard
     3. Prompt                             3. Prompt


  ISPF Profile conflicts                Edit Profile conflicts
  1  1. Keep                            1  1. Keep
     2. Discard                            2. Discard
     3. Prompt                             3. Prompt


  Application Profile conflicts         Batch Profile conflicts
  1  1. Keep                            2  1. Keep
     2. Discard                            2. Discard
     3. Prompt


  Other Profile conflicts
  1  1. Keep
     2. Discard
     3. Prompt
```

Simultaneous TSO Logons to Multiple LPARs in Sysplex

- **Specify unique identifier for Temporary Data Sets - Additional Qualifier (recommend using &SYSNAME symbol in this parm)**
- **Use "/" on Multi-logon Profile Sharing to enable profile sharing**
- **Use "/" on Prompt for Profile ENQ Lockout to be prompted if profile cannot be updated by ISPF due to ENQ contention**
- **For ENQ Lock Wait and ENQ Lock Retry Count, stay with defaults of 1000 (1 second) and 1, respectively**
- **Recommend defaults of "Keep" for profile conflicts under TSO (keep option works as currently, last update "wins"), and "Discard" for batch, to prevent batch updates from overriding TSO updates**
- **Discard could be used to make one system the "master", where it would specify "Keep" and all others "Discard"**
- **Create shared profile dataset and modify TSO logon or ISPF invocation process to allocated shared profile**

Simultaneous TSO Logons to Multiple LPARs in Sysplex

- **SHRPROF command allows user to modify their own settings**

```
+---------------------------- ISPF Settings ------------------------------+
|                    Multi-Logon Profile Sharing Settings                 |
| Command ===>                                                            |
|                                                      More:      +  |
| Profile Enqueue settings                                                |
|    Enter "/" to select option         ENQ Lock Wait . . . . . . 1000    |
|    /  Prompt for Profile ENQ Lockout  ENQ Lock Retry Count  . . 1       |
|                                                                         |
| Profile conflicts                                                       |
|    System Profile conflicts           Reference List conflicts          |
|    1  1. Keep                         1  1. Keep                         |
|       2. Discard                         2. Discard                      |
|       3. Prompt                          3. Prompt                       |
|                                                                         |
|    ISPF Profile conflicts             Edit Profile conflicts            |
|    1  1. Keep                         1  1. Keep                         |
|       2. Discard                         2. Discard                      |
|       3. Prompt                          3. Prompt                       |
|                                                                         |
|    Application Profile conflicts      Batch Profile conflicts           |
+-------------------------------------------------------------------------+
```

Simultaneous TSO Logons to Multiple LPARs in Sysplex

- **For sites from z/OS V1R4 to z/OS V1R8:**
  - IF YOU ARE USING MULTIPLE LOGON WITH A NON-SHARED OR TEMPORARY PROFILE DATASET, STOP, CREATE A SHARED PROFILE DATASET, AND CHANGE SPFEDIT ENQ FROM SCOPE=SYSTEMS TO SCOPE=SYSTEM FOR DATASETS MATCHING PROFILE NAME (E.G. *.ISPF.PROFILE)

- **For sites at z/OS V1R9 or higher:**
  - IF YOU ARE USING MULTIPLE LOGON WITH A NON-SHARED OR TEMPORARY PROFILE DATASET, STOP, CREATE A SHARED PROFILE DATASET, AND ENABLE SHARED PROFILE SUPPORT

- **RCF has been submitted to IBM, and ISPF documentation will be updated to reflect that a shared profile dataset should be used with shared profile support enabled**

Simultaneous TSO Logons to Multiple LPARs in Sysplex

- User logs on to SYSA, and then SYSB, and submits a job to SYSB
- When the job completes on SYSB, NOTIFY appears on SYSA since JES2 sends the message to whoever logged on first
- SHARE requirement was submitted circa 2005
- In z/OS V1R12, JES2 addressed this requirement
- JES2 will now deliver NOTIFY to user who submitted the job

Simultaneous TSO Logons to Multiple LPARs in Sysplex

- Another issue relates to SDSF consoles and command support
- Logon to SYSA, go to SDSF LOG/ULOG, then logon to SYSB and go to SDSF LOG/ULOG
- Issue an MVS command from SDSF in SYSB session, and command response in LOG/ULOG will appear on SYSA
- By default, SDSF sets EMCS console id to userid, so all command output is routed to system first establishing CONSOLE id
- As temporary workaround, issue SET CONSOLE with unique id for each ISPF session; since CONSOLE id is saved in ISPF profile, you must issue SET CONSOLE for subsequent SDSF sessions as well
- A SHARE requirement was submitted circa 2005 and SDSF development is aware of this issue, but have not resolved it yet
- Please let SDSF development know if you're interested in this requirement

CHECK this out

(Sam Knutson)

Full text Health Check for z/OS notifications

- Interactive "PULL" with SDSF, IOF, (E)JES, SYSVIEW, TMON, zHMC, and more. Most modern SPOOL browsers and MVS Monitors all provide interfaces to view and manage z/OS Health Checks.
- Old way "PUSH" single line EMAIL from OPS/MVS automation details in
    - Session 2858 Health Checker: User Experience Beyond Installation presented at SHARE in Tampa by Sam Knutson and Dave Danner
    - Session 2208 Bit Bucket x'26' presented at SHARE in Denver by the usual suspects
- Prefer to get full text of exceptions emailed to me decided to see if I could do this with some simple parts

Full text Health Check for z/OS notifications

- **IBM supplied HZSPRNT utility to print out the contents of check output to a file**

- **SMTP email does not require any program products not even free XMITIP though that will make it nicer**

- **Health Checker MLWTO includes the check name i.e.**

  HZS0002E CHECK(IBMXCF,XCF_CF_STR_PREFLIST): IXCH0206E One or more CF structures are not in their preferred location(s).

- **The idea! WTO → OPS/MVS Rule → START procname → PROC invokes HZSPRINT and wraps required text around top and bottom of output queues to SMTP email**

Full text Health Check for z/OS notifications

```
)MSG HZS*
)PROC
if msg.id = 'HZS0001I' |,
   msg.id = 'HZS0002E' |,
   msg.id = 'HZS0003E' |,
   msg.id = 'HZS0004I' then DO

if MSG.MLWTOMIN =0 then DO /* only looking at first line */

PARSE VAR MSG.TEXT msgid check ":"
address "OPER"
"S HZSPRINT,HC='" || check || "'"
```

This part could be done using an MPF exit or another automation tool of your choice

The default in the PROC is print all active exceptions PARM=('CHECK(*,*)','EXCEPTIONS') and the output of HZSPRNT is emailed to the team.

Full text Health Check for z/OS notifications

```
//HZSPRINT PROC HC='CHECK(*,*),EXCEPTIONS'
//HZSSTEP  EXEC PGM=HZSPRNT,
//    PARM='&HC'
//SYSOUT DD DSN=&&OUTHC,
//      DISP=(NEW,PASS,DELETE),
//      DCB=(DSORG=PS,RECFM=FBA,LRECL=256,BLKSIZE=0),
//      SPACE=(CYL,(1,1))
//*
//TSO      EXEC PGM=IKJEFT01,
//        PARM='%HZSPRT01 &HC'
//SYSEXEC  DD DISP=SHR,DSN=SYS2.PROCLIB
//SYSPRINT DD SYSOUT=*
//SYSTSPRT DD SYSOUT=*
//SYSTSIN  DD  DUMMY
//OUT1      DD DSN=&&MAILHDR,DISP=(NEW,PASS),SPACE=(TRK,(1,1)),
//           LRECL=256,RECFM=FB,DSORG=PS
//*
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD DISP=SHR,DSN=SYSOT.HZSPRINT.HELO.TXT
//        DD DISP=SHR,DSN=&&MAILHDR
//        DD DISP=SHR,DSN=&&OUTHC
//        DD DISP=SHR,DSN=SYSOT.HZSPRINT.QUIT.TXT
```

The cataloged PROCdure

Full text Health Check for z/OS notifications

HZSPRNT invoked for a CHECK

```
3 XXHZSPRINT PROC HC='CHECK(*,*),EXCEPTIONS'
4 XXHZSSTEP  EXEC PGM=HZSPRNT,
  XX     PARM='&HC'
  IEFC653I SUBSTITUTION JCL -
  PGM=HZSPRNT,TIME=1440,PARM='CHECK(IBMCSV,CSV_APF_EXI
  STS)'
5 XXSYSOUT DD DSN=&&OUTHC,
  XX         DISP=(NEW,PASS,DELETE),
  XX         DCB=(DSORG=PS,RECFM=FBA,LRECL=256,BLKSIZE=0),
  XX         SPACE=(CYL,(1,1))
```

Full text Health Check for z/OS notifications

- **HZSPRNT Output → OUTHC**

```
*****************************************************************
*                                                               *
* HZSPRINT (UA55711-10200)  2011/08/11 09:09                    *
*                                                               *
* HZSU001I Check messages                                       *
* Sysplex: TESTPLX    System: PT02                              *
*                                                               *
* Filter: CHECK(IBMCSV,CSV_APF_EXISTS)                          *
*                                                               *
*****************************************************************


*****************************************************************
*                                                               *
* Start: CHECK(IBMCSV,CSV_APF_EXISTS)                           *
*                                                               *
*****************************************************************


CHECK(IBMCSV,CSV_APF_EXISTS)
START TIME: 08/11/2011 09:09:31.943339
CHECK DATE: 20071120  CHECK SEVERITY: LOW
CHECK PARM: MIGRATEDOK(SYSTEM)

CSVH0955I A problem was found with each APF list entry displayed.
```

Full text Health Check for z/OS notifications

```
 6 XXTSO      EXEC PGM=IKJEFT01, XX
   PARM='%HZSPRT01 &HC'
   IEFC653I SUBSTITUTION JCL -
   PGM=IKJEFT01,PARM='%HZSPRT01
   CHECK(IBMCSV,CSV_APF_EXISTS)'
 7 XXSYSEXEC  DD DISP=SHR,DSN=SYS2.PROCLIB
 8 XXSYSPRINT DD SYSOUT=*
 9 XXSYSTSPRT DD SYSOUT=*
10 XXSYSTSIN  DD  DUMMY
11 XXOUT1      DD
   DSN=&&MAILHDR,DISP=(NEW,PASS),SPACE=(TRK,(1,1)),
   XX            LRECL=256,RECFM=FB,DSORG=PS
   XX*
```

> Run a simple TSO/E REXX to supply some literals from this LPAR

Full text Health Check for z/OS notifications

```rexx
/* REXX HZSPRT01 */
/* Format subject line for email using PARM and MVS symbols  */
trace n
/* Assign all the input the user entered to variables */
 @parm1 = translate(word(arg(1),1))

If @parm1 = "" then Return '16'


sysplex = MVSVAR('SYMDEF','SYSPLEX')
sysname = MVSVAR('SYMDEF','SYSNAME')
PUSH "Subject: Health Checker Exception" sysplex sysname
   @parm1
"EXECIO 1 DISKW OUT1"
Return
```

> The REXX code to get the Sysplex and System Name to include in email subject

Full text Health Check for z/OS notifications

```
/* REXX HZSPRT01 */
/* Format subject line for email using PARM and MVS symbols  */
trace n
/* Assign all the input the user entered to variables */
 @parm1 = translate(word(arg(1),1))


If @parm1 = "" then Return '16'


sysplex = MVSVAR('SYMDEF','SYSPLEX')
sysname = MVSVAR('SYMDEF','SYSNAME')
PUSH "Subject: Health Checker Exception" sysplex sysname
   @parm1
"EXECIO 1 DISKW OUT1"
Return
```

Use REXX to get the Sysplex and System Name to include in email subject

OUT1 → Subject: Health Checker Exception TESTPLX
    BTST CHECK(IBMCSV,CSV_APF_EXISTS)

Full text Health Check for z/OS notifications

```
12 XXSENDNOTE EXEC PGM=IEBGENER
13 XXSYSIN    DD DUMMY
14 XXSYSPRINT DD SYSOUT=*
15 XXSYSUT2   DD SYSOUT=(B,SMTP)
16 XXSYSUT1   DD
  DISP=SHR,DSN=SYSOT.HZSPRINT.HELO.TXT
17 XX         DD DISP=SHR,DSN=&&MAILHDR
18 XX         DD DISP=SHR,DSN=&&OUTHC
19 XX         DD DISP=SHR,DSN=SYSOT.HZSPRINT.QUIT.TXT
```

- **Using some temporary and permanent files made it easier to debug and piece together quickly**

Full text Health Check for z/OS notifications

← SYSOT.HZSPRINT.HELO.TXT
HELO GEICOJES
MAIL FROM:<OPSMVS@GEICO.COM>
RCPT TO:<systemszos@geico.com>
DATA
To: systemszos@geico.com
Subject: z/OS Health Checker

← OUT1
Subject: Health Checker Exception TESTPLX BTST
    CHECK(IBMCSV,CSV_APF_EXISTS)

← OUTHC
****
*   *
* HZSPRINT (UA55711-10200) 2011/08/11 09:09   *
*

← SYSOT.HZSPRINT.QUIT.TXT
.
QUIT

> The pieces we will concatenate together

File | Message

Ignore | Delete | Junk | Reply | Reply All | Forward | More | Meeting | IM | Move to: ? | z/OS Support | Reply & Delete | To Manager | Done | Create New | Move | Rules | OneNote | Actions | Mark Unread | Categorize | Follow Up | Translate | Find | Related | Select | Zoom

Delete | Respond | Quick Steps | Move | Tags | Editing | Zoom
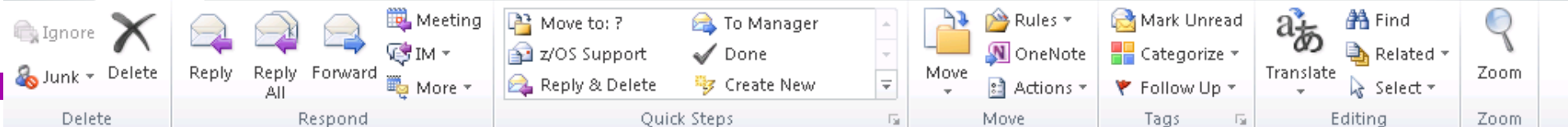
ⓘ Extra line breaks in this message were removed.

From: ☐ SOD OPSMVS   Sent: Thu 8/11/2011 9:10 AM
To: ⊞ Systems Z / OS
Cc:
Subject: Health Checker Exception TESTPLX PT02 CHECK(IBMCSV,CSV_APF_EXISTS)

```
* Start: CHECK(IBMCSV,CSV_APF_EXISTS)                    *
*                                       *
*****************************************************************

CHECK(IBMCSV,CSV_APF_EXISTS)
START TIME: 08/11/2011 09:09:31.943339
CHECK DATE: 20071120  CHECK SEVERITY: LOW  CHECK PARM: MIGRATEDOK(SYSTEM)


CSVH0955I A problem was found with each APF list entry displayed.

VOLUME DSNAME                          ERROR

*SMS*  SYSCT.TS410.TG4101.CICS.SDFHLINK          Allocation failure

* Low Severity Exception *

CSVH0957E Problem(s) were found with data sets in the APF list.

  Explanation:  CSVH0955I has been placed in the message buffer to
    describe the APF list entry error and condition that caused the
    exception.

  A potential system integrity risk exists when a data set cannot be
    allocated using the criteria specified in the system APF list. If
```

Full text of exception in my Outlook Inbox

ⓘ See more about: SOD OPSMVS.

Start | 7 M... | oa3... | 2 W... | redp... | 2 V... | X1 -... | 3:13 PM

Full text Health Check for z/OS notifications

- XMITP freeware could be used to make it pretty
- CA OPS/MVS asked to provide SMTP and HCHECK functions to allow us to do this easier
- Maybe we should ask IBM to add some SMTP and HCHECK functions in base z/OS TSO/E?
- Someone could probably write some fancy REXX code to avoid using a PROC
- While many things are possible the goal of doing this quickly with a few simple parts and a few lines of REXX code was accomplished
- *Please build something better and SHARE it*
- IBM, CA and friends please consider this a request to Make it Easy for all your customers. We would like full Health Checker management in a nice, easy to use/install Web UI and provide easy to use parts to get Check output and push it through outbound interfaces

APARs of Interest

(Sam Knutson)

APARs of Interest OA36837

- OA36837 PREDICTIVE FAILURE ANALYSIS (PFA) TREATS TSO USERID AS PERSISTENT JOBS IN PFA_FRAMES_AND_SLOTS_USAGE CHECK (open)
  - PFA treated TSO users who logged on within an hour of IPL as persistent jobs
  - TSO users come and go and storage use varies widely
  - TSO users will be removed from modeling by the APAR
  - Please run PFA, investigate exceptions, report out of the box behavior that does not make sense to IBM and help improve this tooling designed to detect 'soft' failures
  - See session 09807 Predictive Failure Analysis – Customer Experience and Detecting and Diagnosing Problems when z/OS "Thinks" it is Running Okay. This was presented here at SHARE in Orlando by Sam Knutson and Bob Abrams

APARs of Interest OA31592

- OA31592 TSO/E USERID BECOMES HUNG, CANNOT BE CANCELLED. THE FORCE COMMAND MUST BE USED TO REMOVE THE USERID.

- CLOSED FIN fix included in base at 1.13

- Original problem reported in 2009 after we upgraded z9 to z10 APAR taken in 2010

- Local Fix is remove all the authorized commands and programs that reside under IKJTSOxx AUTHCMD & AUTHPGM from the PLATCMD and PLATPGM sections of IKJTSOxx. DO NOT remove any commands or programs from AUTHCMD and AUTHPGM lists, you only want to remove the commands and programs from the PLATCMD and PLATPGM lists that are the same as those under AUTHCMD & AUTHPGM.

- IBM updated the sample IKJTSO00 in 1.12 to remove authorized commands from the PLATCMD list and deleted all PLATPGM entries

- You might want to review and cleanup your IKJTSO00

APARs of Interest OA31592

- D IKJTSO is the operator command to display and SET IKJTSO= is operator command to update

- PARMLIB TSO command allows you to display and update IKJTSOxx settings dynamically i.e. PARMLIB UPDATE(xx)

- Search IBMLink for Parallel Detach for related interesting reading

- IBM created the Parallel structure in the TMP years ago when resources were scarce as a perceived means to optimize some processing and those who know have expressed some doubt that this is needed today but IBM laudably values compatibility very highly and chooses to maintain the current processing

- Everything functions correctly and as efficiently so far as we can measure without any PLATCMD or PLATPGM entries and that is how we have been running for two years

- Removing PLATCMD and PLATPGM will simplify the task structure and task termination at times in a TMP asid probably a good thing

APARs of Interest OA31592

- **My IKJTSO00 related entries in 2009**

CURRENT PARMLIB SETTINGS FOR PLATCMD

ALLOCATE ALLOC ALTLIB IKJADLIB ATTRIB ATTR

CALL IKJEFG00 EXEC EX IKJEXC2 FREE

UNALLOC PRINTDS PR IKJEFY50 PROFILE PROF

SUBMIT SUB STATUS ST IKJEFFCA LISTBC
LISTB PARMLIB IKJPRMLB RECEIVE SEND SE
TRANSMIT XMIT SYNC RACONVRT CONSPROF

CURRENT PARMLIB SETTINGS FOR PLATPGM

IEFBR14 IKJEFF76

- **My IKJTSO related entries for the last 2 ½ years**

THERE ARE NO PLATCMD COMMANDS DEFINED TO THE
SYSTEM

THERE ARE NO PLATPGM PROGRAMS DEFINED TO THE
SYSTEM

APARs of Interest OA36933

- We use IBM RSU as the basis for our z/OS and subsystem preventative service
- Installation of RSU1103 exposed a problem where IBM DLT0 utility jobs began to ABEND U0479
- OA32318 NEW FUNCTION SUPPORT FOR IMS R12 provides 256 shared subpools for VSAM buffers used by IMS R12 which is still in early support
- Unfortunately GA lower level releases of IMS R10 and R11 have a bug which is exposed by OA32318
- Installation of the PTFs for OA32318 without installing the PTFS for apars PM38458 for IMS V10, PM38517 for IMS V11, PM38518 for IMS V12 will result in IMS U0479 abends when issuing a call to retrieve buffer pool statistics
- DFSMS has now marked PTFs from OA32318 PE by OA36933

APARs of Interest OA36933

- The prompt and timely publication of PE data (HOLDDATA) is in our own best interest, and in the best interest of each of our organizations. Do any of us want to rediscover known problems? Problems which already have been solved? Why would anyone want that? How do you feel to know that IBM knew all about the problem that you (re)discovered nearly a month before you went forward with your maintenance?

- What I do when I notice a "failure to PE a PTF" problem is to open a PMR with IBM and call them on it.

- I would encourage all of you to do so as well.

- By opening PMRs, we will remind IBM that they should do everyone (both us and them) a huge favor and be prompt and timely with PE notifications.

- Highlights from Brian Peterson's 2004 post to IBM-MAIN

APARs of Interest OA36933

- OA36933 will resolve the PE on OA32318
- The intial approach was the PTFs for OA32818 were flagged as AI on June 2nd indicating that an IMS APAR/PTF is required to be installed before or at the same time as PTFs for OA32818. The cross product dependency section of the PSP for IMS V10, 11 and 12 was updated on May 10th because "There is not an error in the DFSMS code"
- PE prevents installation without being aware of the new problem and the new PTFs shipped from OA36933 will have appropriate HOLDDATA
- PE's are good!
- DFSMS did the right thing in OA36933!

APARs of Interest OA35749

- OA35749 ABEND0C1 OR ABEND0C4 IN IFG0194D BECAUSE REG14 IS BAD AFTER RETURNING FROM THE UDA EXIT AND SSI CALL

- Multi-System IMS data sharing outage where UA60164 is recommended by IMS Level-2

- Other IMS data sharing customers have experienced the same problem

- Further root cause analysis with DFSMS eventually highlights involvement by CA Common Services r12 (base)

- APAR OA35749 has been updated with additional information to reflect this

- CA HYPER RI31481 ENF - Z/OS. PTF available RO31701 - IMS OUTAGE - S0C1 ABEND AFTER SSI FUNC=37

APARs of Interest OA35749

- **CA Common Services r12 can still be downloaded and they do not remanufacture base products**
- **Applying preventative service after installation of base products is a proven practice you may want to verify that your site does this**
- **There seems to be a missed opportunity to PE the base FMID remember that PE is good**
- **IBM is not the only vendor with HIPER notifications you may want to insure that your team members are subscribed to all your key ISV notifications**
- **CA Common Services r12 had an unrelated HYPER which we also found impacting caused an IPL RO28449 CCIMVS HIGH VOLUME- ECSA OVERLAY WITH CCI SYSID CHARACTERS**

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