zSAP Customer Call notes – February 2016

Consolidated notes from the North American and Worldwide zSAP DB2 experiences call.

Company 1
- Continuing to work on DB2 10 to 11 migrations
  - Downtime migrations – no issues
    - Issue with SAPCL due to remote install process
      - Needed to change DB2 10 libraries
  - Online migrations – have performed a few
    - Issues with long running processes
    - Waiting on APARFIX for PI40755
      - APAR about long runtimes for DSNTIJTC job due to locks on the DB2 catalog
      - Currently using workaround of recycling SAP work processes
        - o Set parm rdisp/wp_auto_restart to small time
  - Planning on May – June for production migration
- Working on SAP EHP5 to EHP7 upgrades
  - Looking at DB2 extended RBA conversion for the application tables
- Planning to test CLI failover after DB2 11 migrations
  - DB2 Connect 10.5 FP6 special build 35135 is now available
    - See SAP note 81737 update on 25 Feb
  - Company will start testing
- Question if anyone is using the new DSN_STAT_FEEDBACK and SYSSTATFEEDBACK tables to identify missing statistics
  - LinkedIn discussion: https://www.linkedin.com/groups/4723952/4723952-6107986084866637824
- DB2 production outage
  - Transport failed when the DB2 changes failed by the SAP dictionary was updated
  - Known issue that SAP and IBM are working on
- DB2 production outage
  - PBG tried to extend and hit the VSAM constraint that limits a dataset to 59 volumes
  - Ran REORG to move the dataset

Company 2
- Working on setting up monitoring from DBA Cockpit
  - Installing SAPCL, SACCMSR
  - Connecting Omegamon reporting in DBA Cockpit
- Testing with DB2 BACKUP SYSTEM
  - Dumping backups to tape after the backup, using AUTODUMP, in order to better utilize tape volumes
  - If dump is part of backup, the tape would not fill up resulting in too many tapes being used

- In z/OS 2.2, new HSM improvements to allow dumping from different LPARs
- Company 1 is doing the same thing
  - Company 1 suggested monitoring the AUTODUMP process as if it gets stuck, all other BACKUP SYSTEM jobs could begin to fail.
- System is built and ready for go-live in May.
  - ECC system running automotive module

Company 3
- Migrated production to DB2 11
- Minor issue with defective row compression; did reorg to fix
- PMR43189 / APAR PI54711
  - ABEND 04E 00C90101 was seen in DSNIMOFR ERQUAL5015 for a versioned compressed row.
  - Other Customers have seen overlays, with ABEND04E RC00E2000E in module DSNSVSFB OFFSET08C6 and OFFSET08A2 or ABEND04E RC00E2000F DSNSVSFB+08C6
  - Also, ABEND04E RC00C90101 DSNIOST2 ERQUAL5064 was seen with ABEND04E RC00C90101 in DSNISFX2 ERQUAL5064 or DSNIONX2 ERQUAL5064 also possible, due to an in correct row calculation
  - LOCAL FIX: REORG so all versioned rows are rebuilt into the current version
- RRF ZPARM set to on
  - BRF ➔ RRF 60% increase
  - Went back to BRF decreased by 40%

Company 4
- DB2 11 has been downloaded
- Waiting for catalog support to start working on migration
- Want to have sandbox done by end of March, completing all migrations by early May
- z/OS 2.2 rolling out into SAP landscape
- Clean up going on by application areas on BIC tables; getting rid of older data in tables; going down to 6 months
  - These tables have GB and GBs of data
- Bringing in new VTS to help with log archiving
- PMR24077 type of DASD in RTS is SSD when SSD is not installed; DB2 support gave to DFP storage software support
  - This is causing delays to DB2 objects being selected for REORG

Company 5
- Upgrading DB2 Cloning Tool to 3.2
- DB2 11 - Opened PMR06976 to report large negative number for space

- Ran utility STOSPACE STOGROUP * and the value for SYSDEFLT is -1653930096

Company 6
- Migrated to z13 a couple weeks ago; it is working well
- Stopped conversion to RRF to do the following first
  - Do inline LOB conversions
  - Convert from Vargarphic to Graphic; so, variable length to fixed length
  - Then to RRF
  - Kept RRF option in ZPARM so any reorging will convert to RRF
  - On SAP GTS system, have one table that is huge; doing partition at a time
    - It is still growing in its space usage even after Vargraphic ➔ Graphic conversion
- Had S0C4 in SAP ECC production; going from PUT507 ➔ PUT1510
- PUT1510 looks like it should help, but time will tell
- PUT1510 is fixing the issue with applying old PTFs reported in the 08272015 Monthly Customer Experiences meeting

Company 7
- Starting fix packs for develop system this week
  - Completed manual cloning of test systems
- Had password issue with setting up SAPCL
  - Got it from SAP. It had to do with case on and type of characters
- Production abend PMR40618 RC00E20043
  - The DB2 V10 subsystem abended in ssidDIST with an abend DUMP TITLE=DB2F, ABND=04E-00E20043,U=SYSOPR ,M=N ,C=101.ASMC-EUATTACH,M=DSNVSTAI,LOC=DSNSLD4 .DSNSTKGG+0D30
  - The subsystem current runs at RSU1510.
  - The abend 00E20043 occurred due to zero HEADSKBG. Support says there may be similar cases were reported in the past.
- Applying DB2 11 pre-migration prereqs
- Half of the systems this weekend and half the following weekend
- z/OS 2.1 this year
- SWNCMONI table large - there is cleanup process for these.
  - See SAP Note 706478 - Preventing Basis tables from increasing considerably
  - See item 72: The table SWNCMONI contains historical workload data for transaction ST03. You can use transaction ST03 -> "Collector and Performance DB" -> "Performance Database" - > "Monitoring Database" - > "Reorganization" to optimize data collection, by reducing the retention periods on a daily, weekly and monthly basis.

Company 8
- Testing EHP 7; upgrading using NZDT
- Complete this year for all systems
- DB2 11 ➔ have migrated 40-50 systems so far

- Starting on online migration for Data Sharing Groups in a couple of weeks
- Waiting on APAR PI40755 2/28 delivery; related to locks for prepares
  - Applied the APAR fix on both DB2 10 and DB2 11 libraries. After applying we tested DB2 online upgrade and that ran very smoothly, so from the DSNTIJTC job point of view everything looks great.
- Looking at new features in DB2 11 and EHP 7; combination of the two
- Customer asked others about using ZDT for EHP
  - Comment from another customer; Using NZDT; Created thousands of triggers and is running in production for about a week; no performance or overhead issues
- Customer is also using NZDT and need 3GB -4GB extra

Company 9
- Freeze ends in February
- Working on IDAA accelerator
- ECC upgrade; Everything went well

Company 10
- Rolling out PUT1511
- Going into Production this weekend
  - Plan to complete maintenance roll out by end of March
- Several SAP upgrades are inflight
  - Plan to complete these upgrades by end of April
- Doing manual cloning process
- Using CATMAINT for HLQ change
  - Doesn't work right for a couple of tables
    - Bounce DB2 and that fixes to clear cache
    - Might try stopping DB next time instead of bouncing

Company 11
- Upgrading 3 big SAP Systems with EHP 7 SP8; using NZDT
  - Getting to this new EP and SP will positioning them for ZDT usage for future
  - Completed one last weekend
  - The other two to be completed in March
- Working on PUT1510 for DB2 11
- Had to stop z/OS 2.2 migration due to problems; Resuming soon
  - Ran backup for master catalog; started getting errors and had to restart master catalog space
- PMR10565 / APAR OA49877
  - We have a daily job that runs - this job recreates a backup master catalog. The backup is deleted, a LISTCAT is done on the master catalog to get all the information from the current master, and then IDCAMS card are built to create a 'backup' catalog that is identical. This job ran fine on 20Dec on

this system, which was z/OS 2.2 at the time. However, when it ran again on 21Dec, all sorts of problem occurred.

> IEC161I 064(D708009C)-086,CATALOG,ALLOCATE,SYS00326,,,
> IEC161I
> SYS1.CNTR3.BACKUP.CATALOG,SYS1.CNTR3.BACKUP.CATA
> LOG,
> IEC161I SYS1.CNTR3.BACKUP.CATALOG

- PMR31395 / AE'd the OA48777 apar with current fix OA50026
  - During clone restores ICF catalog; getting errors
  - SYSTEM ABEND CODE=438 REASON CODE=02390003
  - ABEND438 is occurring due to a bad UCB address passed in by IGG0CLF5+1316 at UA79080 on the ENQ request. The UCB address looks to be a captured UCB address allocated in LSQA rather than the real one.
  - This appears to be a match for OA48777; The apar target has been pushed out to late February.
  - We run into this problem when we do an SAP system restore/refresh, It appears the abends occur during/after some of the jobs that are using DFDSS to restore the files and/or update the restored catalogs. The existing catalog is closed, unallocated and export disconnected prior to this restore process, but we get the abends once the DFDSS restore is completed and while updates are being made to the restored catalog. There is a DEFINE UCAT command during this process which I believe imports the catalog name back into CATALOG address space.
- Testing Data Sync Manager from EPI-USE
  - Time slice cloning tool using for next scheduled refresh

Company 12
- Couple of problems with cloning tools with DB2 11
- Using BCV backup of Data Sharing group going to non-Data Sharing cloning target
- Cold starting
- Recommendation that was made after words pages were at wrong level
- Getting levelid errors
- PMR12717
  - During the cloning process we are receiving an inconsistent page on DSNLLX01 and subsequently on DSNDB01.SYSLGRNX when attempting to rebuild the DSNLLX01 index.
- Copy prod ➔ QA using V10 process
- Getting errors in DBD
- High level qualifier not correct
- DB2 Cloning Tool 3.1 ➔ applying maintenance,
- Will upgrade to DB2 Clone Tool 3.2 after resolving problem
- PMR47920
  - After cloning an entire DB2 V10 subsystem, we have found at least one object where the DBD was not updated correctly. We had this occur in

the past and applied UK94615 and it resolved the problem though we had to repair several DBDs at that time. This PTF is still in place.
- Went to z13 single CEC
- Working on z/OS 2.2

Company 13
- How many are using DB2 SLB?
  - 3 customers on the call are using system level backup
- DB2 11; take imagecopies and SLB
  - Imagecopies during week
  - Backup system taken Sunday
  - If image copy gone, DB2 Recovery isn't finding the Sunday SLB
  - PMR 17667,010,678
- Migrating to DB2 11 and in step 37 during reorg of DBD01 archive log was called, which has been deleted
  - PMR 17952,010,678
  - DSNTIJEN step ENFM0037 REORG TABLESPACE DSNDB01.DBD01 asks for old deleted archlog.
  - Removing CONVERTV10 and running just reorg has the same problem.
- Migrated two non-SAP production systems to DB2 11 with no problems

Customer 14
- Everything is running well
- SAPCL procedure issues after going to DB2 11
- Waiting for DASD for migration to DB2 11,
  - waiting delivery next couple of weeks
  - resume the end of March
  - complete in May
- Systems team will be looking at SUSE ; V12
- Looking at z/OS 2.2

Customer 15
- Increased EDMDBDC when running CATMAINT
  - 00c90089 - The environmental descriptor manager (EDM) function of the data manager subcomponent did not have enough storage in its pool or data space to retrieve the object. The object can be either a database descriptor (DBD), a skeleton cursor table (SKCT), or a skeleton package table (SKPT). The object is identified by a DBD ID, SKCT plan name, or SKPT package name.
- Cincinnati Finance doubles EDMDBDC and EDMpool when running CATMAINT
- Getting ready for DB2 11
  - Upgrading DB2 Connect first; 10.5 FP6 SB35135
  - SAP Note 1991240 - DB2-z/OS:CCMS: DBA Cockpit CLI Failover Support
  - DB2 11 start in April

Notes:

- **Upcoming webcasts:**

  Title: IBM DB2 Reorg Utility – Learn tips and techniques for IBM DB2 11 REORGs
  Speaker: Paul Walters, Navy Federal Credit Union
  Date / Time: 15 Mar, 2016 / 17:00 GMT
  Register at: https://ibm.biz/NFCU_March15

- **Issues when transport make database object changes:**
  A transport that makes a change to a database object may fail due to the object being
  in use. Two SAP notes are available to deal with this issue:
  225849 - DB2 z/OS: DDL - DML, transport failure because of statement marked
  active in DB2 cache
  2238483 - Termination during execution of DDL statement in database utility (SE14)
  creates object inconsistencies

- **How long will Connect.ini be supported?**
  - o With DB2 12, customer need to use CLI failover. With previous DB2
    releases, there is no hard cut-off date.

- **Customer provided** what they are using for REORG parameters when using the SAP
  Conversion Tool for his inline LOB and VARGRPHIC conversions
  - o Here are the reorg parameters we are using in SAPGUI DB13 to perform the
    inline LOB and VARGRAPHIC conversions. I updated the
    UTILS:REORG_TS_RST and UTILS:REORG_TS utility skeletons in DB2J.

    Original from SAP:

    ```
    REORG TABLESPACE &OBJECT.
          SHRLEVEL CHANGE
          MAPPINGTABLE $SID.QT000$MAPID&THDINDEX.
          COPYDDN(COPYTPL)
          RECOVERYDDN(COPYTPL)
          STATISTICS TABLE(ALL)
          SAMPLE(10)
          INDEX(ALL KEYCARD)
          UNLDDN(UNLDTPL)
          SORTDEVT SYSDA
          DRAIN_WAIT 15
          DRAIN ALL
         MAXRO 240
          DELAY 900
          LONGLOG CONTINUE
          TIMEOUT TERM
          RETRY 20
          RETRY_DELAY 300
          DEADLINE NONE
    ```

    Our customizations:

```
REORG TABLESPACE &OBJECT.
     SHRLEVEL CHANGE
     MAPPINGTABLE $SID.QT000$MAPID&THDINDEX.
     COPYDDN(COPYTPL)
     RECOVERYDDN(COPYTPL)
     STATISTICS TABLE(ALL)
     SAMPLE(10)
     INDEX(ALL KEYCARD)
     UNLDDN(UNLDTPL)
     SORTDEVT SYSDA
     DRAIN_WAIT 15
     DRAIN ALL
     MAXRO 10
     DELAY 10
     LONGLOG CONTINUE
     TIMEOUT TERM
     RETRY 6
     RETRY_DELAY 10
     DEADLINE NONE
```

We have had several reorgs fail for one reason or another thru SAP's process. When they fail, our scheduled reorg process picks up these tablespaces that are in AREO* and AREOR status and perform the reorg successfully.

- LinkedIn post for starting a discussion around using SYSSTATFEEDBACK and DSN_STAT_FEEDBACK tables once migrated to DB2 11.
    - SAP on IBM z Systems
        - https://www.linkedin.com/groups/4723952/4723952-6107986084866637824
        - **DB2 optimizer stats feedback**

            For those of you that have migrated to DB2 11 already, has anyone tried the new DSN_STAT_FEEDBACK and SYSSTATFEEDBACK tables to identify missing statistics which could help improve the optimizer's choice of access paths?

- Thinking about migration to DB2 11? The IBM Tiger Team offers a workshop SAP Considerations for DB2 11 Migration. If you are interested, please contact Richard Ruppel (rmruppel@us.ibm.com) or Mary Siart (mailto:mesiart@us.ibm.com).

- Please go into RFE and look at current requirements created by zSAP customers. If you see a requirement that is important to you, please add your vote. If you have additional information in regards to supporting a requirement, please add in comments.
    When using 'Search by attributes' use
    - Brand: Information management
    - Product family: DB2 for z/OS
    - Keywords: VLDB

- If you have questions about how to do this, please contact please contact Richard Ruppel (rmruppel@us.ibm.com) or Mary Siart (mailto:mesiart@us.ibm.com).