Multi Table/Tablespace to Single Table PBG 4 Techniques

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Agenda

- Background – Why are we here?
- Overview of 4 Methods to convert from MTTS to STTS PBG
  - Unload/Drop/Create PBG/Load – aka UDCL
  - Move Table
  - Create '%_NEW' Tables in PBG, SQL to Copy Data, Rename – aka RENAME
  - BMC Change Manager DML
- Pro/Con of each
- Effort for each method
  - Number of panel edits time per Table
  - Amount of code needed to convert each table
- Recommendations
- Questions

If you ran this query...... on all your subsystems

SELECT SUM(NTABLES)
FROM SYSIBM.SYSTABLESPACE
WHERE
NTABLES > 1

If you anticipate you'd get……

Then this session will be……

0-100	Boring
100-500	Mildly interesting
500-1,000	Interesting
1,000-25,000	Very interesting
25,000+	Life changing

History and background

- Deprecation of MTTS announced in March 2019 with FL504
- Only options at the time:
  - Navigate Panels in vendor Admin products.
  - Code UDCL (Generate-And-Tape)
- FL508 June 2020
  - Move Table Support

Unload/Drop/Create/Load (UDCL)

UDCL Details

- Unload Table
- Drop Table
- Create PBG (DSSIZE, MAXPARTIONS) for each Table in MTTS
- Create Table (IX, VW, SY, AL, RI) in new PBG
- Load Data
- Copy, Runstats, Rebind

UDCL Pros

- Any release of Db2 and Function level

UDCL Cons

- Lots of Code required (~150 lines of DDL/Utilities per Table)
- Risk
  - Drop
- Availability – objects unavailable from Drop to end of process
- Administration time (30 seconds of panel time per table)
  - 400 Tables is 4 hours of administration using admin panels
  - 400 Tables is 16,000 keystrokes in panels

UDCL Admin Panel Flow – Doing 400 Tables….

UDCL Admin Panel Flow

UDCL Admin Panel Flow

UDCL Admin Panel Flow

UDCL Admin Panel Flow

UDCL Admin Panel Flow – That's 1! 399 more to go
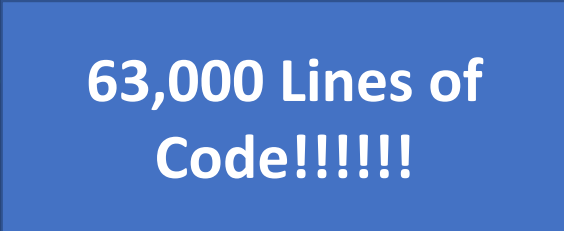
400 Tables Generate-and-Tape
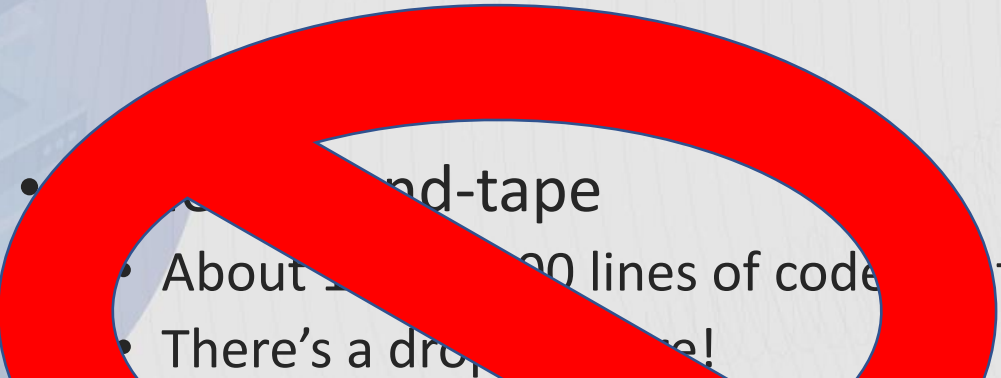
```
EDIT          SLSTXM.DAGA.MT0505A                Columns 00001 00072
Command ===> _____         Scroll ===> CSR
063747   REBIND TRIGGER PACKAGE ( -
063748   ASUA1SC.SDDD2 +
063749   ) -
063750                   PLANMGMT(EXT
063751
063752   REBIND TRIGGER PACKAGE (
063753   ASUA1SC.SDDD1 +
063754   ) -
063755                   APREUSE(NONE)            -
063756                   BUSTIMESENSITIVE(NO)     -
063757                   SYSTIMESENSITIVE(NO)     -
063758                   ARCHIVESENSITIVE(NO)     -
063759                   EXPLAIN(NO)
063760
063761   REBIND TRIGGER PACKAGE ( -
063762   ASUA1SC.SDDD1 +
063763   ) -
063764                   PLANMGMT(EXTENDED)
063765
063766  -SYNC 208725 END OF REBIND PLANS SECTION
063767
```

63,000 Lines of Code!!!!!!

Move Table Admin Panel Work and Code Generated – 400 Tables
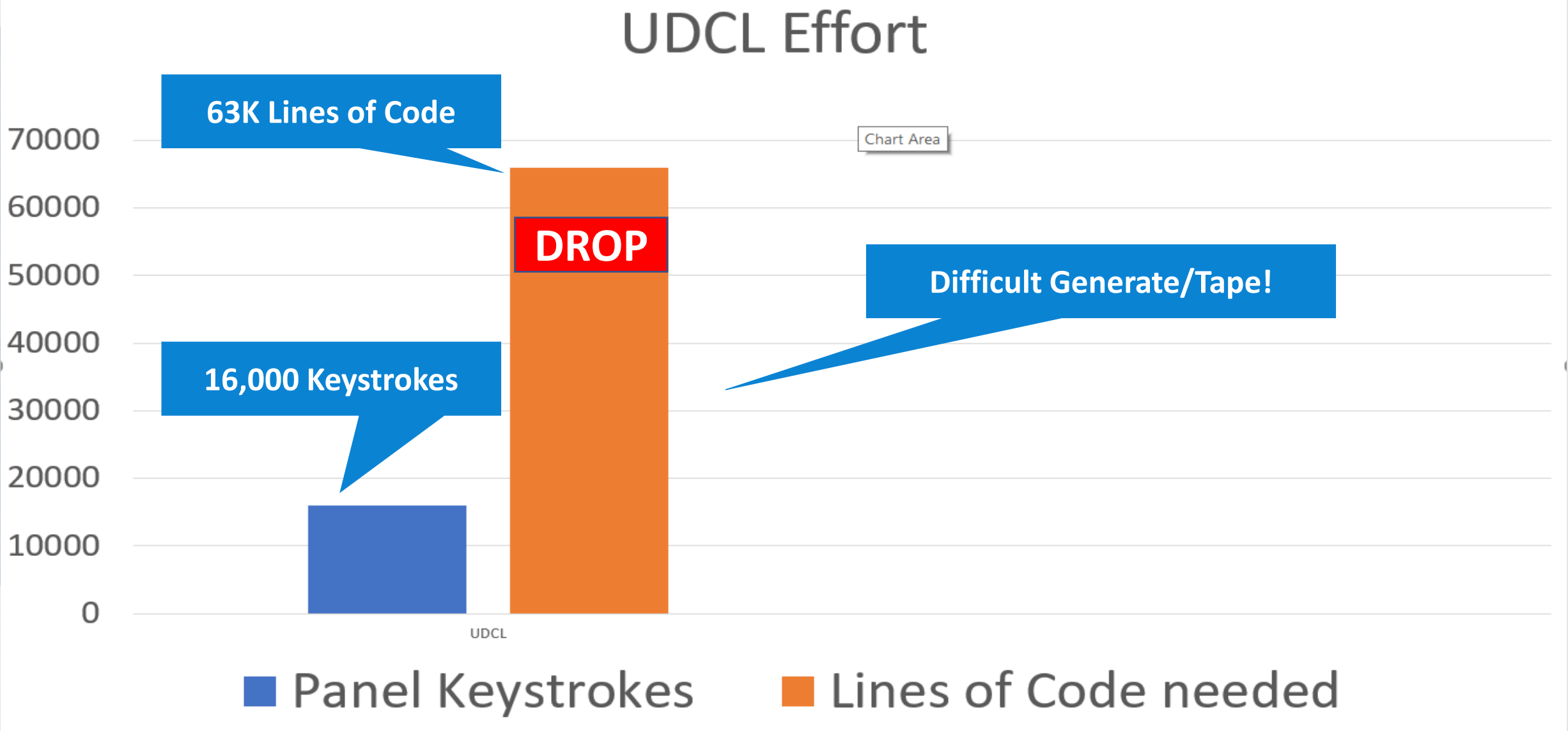
UDCL Administration Summary

- Administration tool panel navigation
  - About 30 Seconds per table
  - About 40 keystrokes per table

- nd-tape
  - About 00 lines of code table
  - There's a dro re!

UDCL Administration options

- Vendor administration panels for small/medium numbers
- No good options for large numbers!
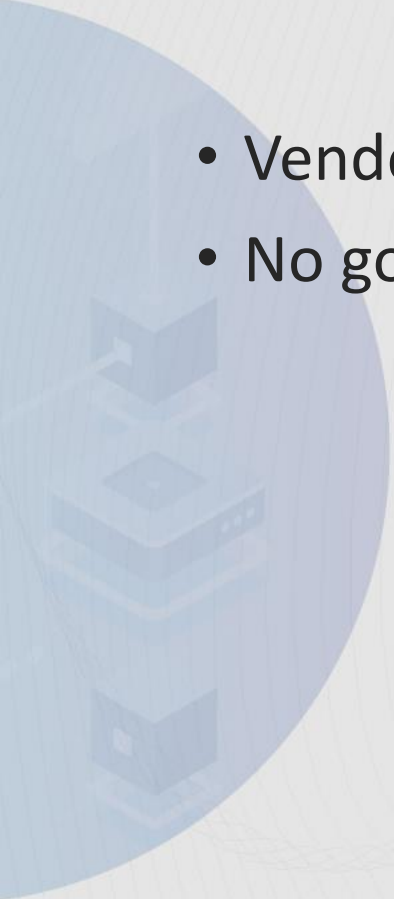
Move Table

Move Table Details

- Be at FL508 (Available June 2020)

- Create PBG (DSSIZE, MAXPARTIONS) for each Table in MTTS
  - Must be MAXPARTIONS 1 and DEFINE NO

- Alter Tablespace Move Table to Tablespace….

- Online Reorg

- Runstats, Rebind

- Alter TS MAXPARTS > 1

TABLESPACE LEVEL OPERATIONS

Move Table Pros

- Less code (About 1/3 UDCL)
- Simpler code – Easier to Generate and tape
  - Create PBG TS
  - ALTER TABLESPACE DB.TS MOVE TABLE CR.NAME TO TABLESPACE DB.PBGTS
  - Reorg/Copy/Runstats/Rebind
- Low Risk
  - No Drop
- High availability

Move Table Cons

- FL508
- No ease of product Administration time (30 seconds of panel time per table)
  - 400 Tables still about 4 hours of panel work
- Generate-and-Tape
  - 400 Tables about 20,000 lines of Code
  - No checking prior to execution
    - Mismatch between TB and new PBG
      - Missing PBG
      - Duplicate TB into Same PBG

BMC Catalog Manager Generate-And-Tape Process

- Create Model for CREATE Tablespace (PBG) – (named MVTS)
- Create Model for MOVE TABLE DDL (named MOVE)
- From Table List: APPLY Model MVTS to list to get TS PBG DDL
- From Table List: Apply Model MOVE to get MOVE Table syntax
- From Original TS list: REORG ALL from command line to generate REORGS
- From NEW TS List: RUNSTATS ALL from the command line
- From NEW TB list: Enter PG All to get list of Packages, then REBIND ALL for Rebinds

CREATE Member MVTS in Saved SQL Member


```
DAGA.R ---------------------- SQL Table List  -------------- Row 1 to 2 of 2
Command ===>  █                          Scroll ===> CSR
CMD will show commands for this list.  Type command and press Enter        02
Subcommands are: ANALYZE, CUT, DELETE, EDIT, EXECUTE, PASTE, RENAME, TBBROWSE,
TBEDIT.  ANALYZE may be used with SELECT, INSERT, DELETE and UPDATE SQL.
SQL NAME LIKE: SLSTXM.M*
Cmd    Owner    Name          Text
----v---1---v---2----v----3----v----4----v----5----v---6----v---7----v---
       SLSTXM   MOVE          ALTER TABLESPACE :DBNAME.::TSNAME MOVE TABLE
ed     SLSTXM   MVTS          CREATE TABLESPACE TS:OBID IN :DBNAME USING S
****** ******** Bottom of data ****************
```

```
****** ******************************** Top of Data *********************
000001      CREATE
000002      TABLESPACE TS:OBID
000003          IN :DBNAME
000004      USING STOGROUP SYSDEFLT
000005      PRIQTY -1
000006      SECQTY -1
000007      ERASE NO
_  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  - 12 Line(s) not Displayed
000020      DSSIZE 4 G
000021      MAXPARTITIONS 1
000022      MAXROWS 255
000023      INSERT ALGORITHM 0
000024      DEFINE NO
000025      ;
```

Host Variables from SYSTABLES

Get Table list of multi tables....


```
DAGA-R ---------------------------- TABLESPACE LIST  ---------------- ROW 1 OF 4
Command ===> TB ALL   ⬅                              Scroll ===> CSR
                                                                             01

CMD will show commands for this list.  Type command and press ENTER
Lists: ACCTB AL BMCHOBJ BMCHSTEP BMCUHIST CA CL CO DB DP DS FK IC IM IS IX LK
WHERE A.DBNAME = 'MKTAXLU' AND A.NTABLES > 1 FOR FETCH ONLY
Cmd Tablespace       Owner    Segsz Bpool Prts    Tbls      ActivPg      Status Enc Ty
----v----1----v----2----v----3----v----4----v----5----v----6----v---7----v---
    MKTAXLU.DSN8S90C  MKTAXL      4 BP0        0      2         14          A    E
    MKTAXLU.DSN8S90P  MKTAXL      4 BP0        0      4        180          A    E
    MKTAXLU.DSN8S90R  MKTAXL      4 BP0        0      8        180          A    E
    MKTAXLU.DSN8S90X  MKTAXL      4 BP0        0      7        180          A    E
******************************* BOTTOM OF DATA ********************************
```

APPLY MVTS to Table list

```
DAGA-R --------------------------------------  TABLE LIST  ----------------  ROW 1 OF 21
Command ===> APPLY MVTS ALL                               Scroll ===> CSR
                                                                            2
CMD will show commands for this list.  Type command and press ENTER
Lists: ACCTB AL BMCHOBJ BMCHSTEP CA CD CK CL CO CP C2 DB DP DS DT FK IC IM I
ALL FROM LAST LIST
C   Table Name                         Database Tblspace ColsPK Type   Rows     Pages
---v----1----v----2----v----3----v----4----v----5----v----6---v---7----v--
    MKTAXLU.ACT                        MKTAXLU  DSN8S90P   3   1 T       18        1
    MKTAXLU.CATALOG                    MKTAXLU  DSN8S90X   3   1 T        0        0
    MKTAXLU.CUSTOMER                   MKTAXLU  DSN8S90X   4   1 T        0        0
    MKTAXLU.DJJDEPT                    MKTAXLU  DSN8S90R   7   0 T       -1       -1
    MKTAXLU.DJJEMP                     MKTAXLU  DSN8S90R  16   0 T       -1       -1
    MKTAXLU.EACT                       MKTAXLU  DSN8S90R   5   0 T        0        0
    MKTAXLU.EDEPT                      MKTAXLU  DSN8S90R   7   0 T        0        0
    MKTAXLU.EEMP                       MKTAXLU  DSN8S90R  16   0 T        0        0
    MKTAXLU.EEPA                       MKTAXLU  DSN8S90R   8   0 T        0        0
    MKTAXLU.EMPPROJACT                 MKTAXLU  DSN8S90P   6   0 T       74        1
    MKTAXLU.EPROJ                      MKTAXLU  DSN8S90R  10   0 T        0        0
    MKTAXLU.EPROJACT                   MKTAXLU  DSN8S90R   7   0 T        0        0
    MKTAXLU.INVENTORY                  MKTAXLU  DSN8S90X   3   1 T        0        0
    MKTAXLU.PRODUCT                    MKTAXLU  DSN8S90X   8   1 T        4        1
    MKTAXLU.PRODUCTSUPPLIER            MKTAXLU  DSN8S90X   2   2 T        0        0
    MKTAXLU.PROJ                       MKTAXLU  DSN8S90P   8   1 T       20        1
    MKTAXLU.PROJACT                    MKTAXLU  DSN8S90P   5   3 T       77
    MKTAXLU.PURCHASEORDER              MKTAXLU  DSN8S90X   4   1 T        0        0
    MKTAXLU.SUPPLIERS                  MKTAXLU  DSN8S90X   3   1 T        0        0
    MKTAXLU.TDSPTXT                    MKTAXLU  DSN8S90C   3   0 T        0        0
    MKTAXLU.TOPTVAL                    MKTAXLU  DSN8S90C  11   0 T        0        0
```

CREATE PBG TS with 'TS:OBID' as Name

```
DAGA.R                        Confirm SQL              1 to 19 of 525
Command ===> =>                            Scroll ===> CSR

Current SQLID. . . . . . . .    SLSTXM
Edit Options . . . . . . . .    N         Y/N Modify SQL processing options
Edit SQL . . . . . . . . . .    Y         Y/N Edit SQL before executing
Save in SQL table. . . . . .    N         A/Y/R/N A/Y-Append, R-Replace
 Name of saved data. . . . .    MVALTTSMOVE
Save in PDS. . . . . . . . .    N         Y/N Save in PDS
 PDS(member) . . . . . . . .    BMC.DDL(MTT)


Execute SQL. . . . . . . . .    Y         Y/N Execute the SQL
------------------------------------------- SQL -------------------------------
CREATE
        TABLESPACE TS38
            IN MKTAXLU
            USING STOGROUP SYSDEFLT
            PRIQTY -1
            SECQTY -1
            ERASE NO
            FREEPAGE 0
            PCTFREE 5
            GBPCACHE CHANGED
            COMPRESS NO
```

New PBG Tablespaces

```
DAGA-R -------------------------- TABLESPACE LIST  ------------- ROW 1 OF 21
Command ===>                                      Scroll ===> CSR

CMD will show commands for this list.  Type command and press ENTER
Lists: ACCTB AL BMCHOBJ BMCHSTEP BMCUHIST CA CL CO DB DP DS FK IC IM IS IX LK
LIKE MKTAXLU.T%
Cmd Tablespace           Owner   Segsz Bpool Prts   Tbls      ActivPg      Status Enc Ty
---v----1----v----2----v----3----v----4----v----5----v----6---v---7---v----
    MKTAXLU.TS111        SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS122        SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS133        SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS144        SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS151        SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS152        SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS31         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS38         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS43         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS48         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS61         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS64         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS70         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS71         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS72         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS73         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS74         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS75         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS76         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS91         SLSTXM      4 BP0       1      0           -1          T  E      G
    MKTAXLU.TS94         SLSTXM      4 BP0       1      0           -1          T  E      G
********************************** BOTTOM OF DATA *********************************
```

CREATE Member MVTS in Saved SQL Member

```
DAGA.R --------------------------------- SQL Table List ------------- Row 1 to 2 of 2
Command ===> █                                       Scroll ===> CSR
CMD will show commands for this list.  Type command and press Enter        01
Subcommands are: ANALYZE, CUT, DELETE, EDIT, EXECUTE, PASTE, RENAME, TBBROWSE,
TBEDIT.   ANALYZE may be used with SELECT, INSERT, DELETE and UPDATE SQL.
SQL NAME LIKE: SLSTXM.M*
Cmd    Owner     Name              Text
---->----1----v----2----v----3----v----4----v----5----v----6----v----7----v----
ed     SLSTXM    MOVE              ALTER TABLESPACE :DBNAME.:TSNAME MOVE TABLE
       SLSTXM    MVTS              CREATE TABLESPACE TS:OBID IN :DBNAME USING S


************************** Top of Data **************************

--

-- RUN THIS FROM TABLE LIST AFTER CREATING PBG TS WITH MVTS TEMPLATE

--

ALTER TABLESPACE :DBNAME.:TSNAME
        MOVE TABLE :CREATOR.:NAME TO TABLESPACE :DBNAME.TS:OBID
```

APPLY MOVE to Table list

```
DAGA-R --------------------------------- TABLE LIST   ----------------- ROW 1 OF 21
Command ===> APPLY MOVE ALL  <===                      Scroll ===> CSR
                                                                      02

CMD will show commands for this list.  Type command and press ENTER
Lists: ACCTB AL BMCHOBJ BMCHSTEP CA CD CK CL CO CP C2 DB DP DS DT FK IC IM IS
ALL FROM LAST LIST
C   Table Name                          Database Tblspace ColsPK Type Rows  Pages
---v----1----v----2----v----3----v----4----v----5----v----6---v---7---v----
    MKTAXLU.ACT                         MKTAXLU  DSN8S90P    3   1 T      18      1
    MKTAXLU.CATALOG                     MKTAXLU  DSN8S90X    3   1 T       0      0
    MKTAXLU.CUSTOMER                    MKTAXLU  DSN8S90X    4   1 T       0      0
    MKTAXLU.DJJDEPT                     MKTAXLU  DSN8S90R    7   0 T      -1     -1
    MKTAXLU.DJJEMP                      MKTAXLU  DSN8S90R   16   0 T      -1     -1
    MKTAXLU.EACT                        MKTAXLU  DSN8S90R    5   0 T       0      0
    MKTAXLU.EDEPT                       MKTAXLU  DSN8S90R    7   0 T       0      0
    MKTAXLU.EEMP                        MKTAXLU  DSN8S90R   16   0 T       0      0
    MKTAXLU.EEPA                        MKTAXLU  DSN8S90R    8   0 T       0      0
    MKTAXLU.EMPPROJACT                  MKTAXLU  DSN8S90P    6   0 T      74      1
    MKTAXLU.EPROJ                       MKTAXLU  DSN8S90R   10   0 T       0      0
    MKTAXLU.EPROJACT                    MKTAXLU  DSN8S90R    7   0 T       0      0
    MKTAXLU.INVENTORY                   MKTAXLU  DSN8S90X    3   1 T       0      0
    MKTAXLU.PRODUCT                     MKTAXLU  DSN8S90X    8   1 T       4      1
    MKTAXLU.PRODUCTSUPPLIER             MKTAXLU  DSN8S90X    2   2 T       0      0
    MKTAXLU.PROJ                        MKTAXLU  DSN8S90P    8   1 T      20      1
    MKTAXLU.PROJACT                     MKTAXLU  DSN8S90P    5   3 T      77      1
    MKTAXLU.PURCHASEORDER               MKTAXLU  DSN8S90X    4   1 T       0      0
    MKTAXLU.SUPPLIERS                   MKTAXLU  DSN8S90X    3   1 T       0      0
    MKTAXLU.TDSPTXT                     MKTAXLU  DSN8S90C    3   0 T       0      0
    MKTAXLU.TOPTVAL                     MKTAXLU  DSN8S90C   11   0 T       0      0
```

Execute DDL


```
DAGA.R                        Confirm SQL              1 to 19 of 63
Command ===> =>  CSR                          Scroll ===> CSR

Current SQLID. . . . . . . . .    SLSTXM
Edit Options . . . . . . . . .    N          Y/N Modify SQL processing options
Edit SQL . . . . . . . . . . .    Y          Y/N Edit SQL before executing
Save in SQL table. . . . . . .    N          A/Y/R/N A/Y-Append, R-Replace
 Name of saved data. . . . .      MVALTTSMOVE
Save in PDS. . . . . . . . . .    N          Y/N Save in PDS
 PDS(member) . . . . . . . . .    BMC.DDL(MTT)

Execute SQL. . . . . . . . . .    Y          Y/N Execute the SQL
----------------------------------- SQL -----------------------------------
ALTER TABLESPACE MKTAXLU.DSN8S90P
        MOVE TABLE MKTAXLU.ACT TO TABLESPACE MKTAXLU.TS38
                                                                       ;
ALTER TABLESPACE MKTAXLU.DSN8S90X
        MOVE TABLE MKTAXLU.CATALOG TO TABLESPACE MKTAXLU.TS122
                                                                       ;
ALTER TABLESPACE MKTAXLU.DSN8S90X
        MOVE TABLE MKTAXLU.CUSTOMER TO TABLESPACE MKTAXLU.TS94
                                                                       ;
ALTER TABLESPACE MKTAXLU.DSN8S90R
        MOVE TABLE MKTAXLU.DJJDEPT TO TABLESPACE MKTAXLU.TS151
                                                                       ;
ALTER TABLESPACE MKTAXLU.DSN8S90R
        MOVE TABLE MKTAXLU.DJJEMP TO TABLESPACE MKTAXLU.TS152
                                                                       ;
ALTER TABLESPACE MKTAXLU.DSN8S90R
        MOVE TABLE MKTAXLU.FACT TO TABLESPACE MKTAXLU.TS73
```
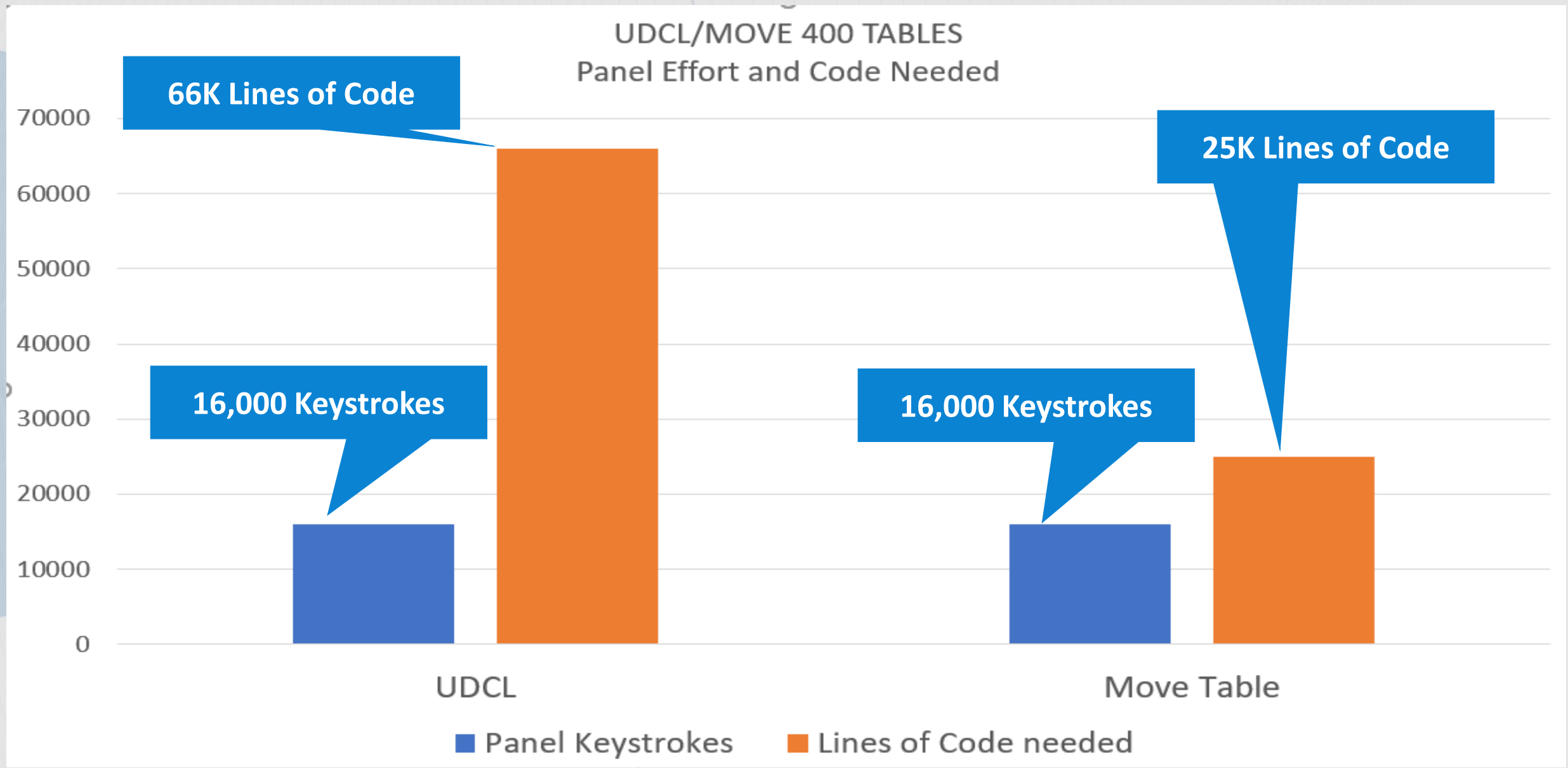
Reorg to Materialize…..

Reorg to Materialize.....

```
EDIT       SLSTXM.BMCCAT.JCL(REORG) - 01.00          Columns 00001 00072
Command ===>                                         Scroll ===> CSR
000040 //DDLOUT    DD SYSOUT=*
000041 //SYSOUT    DD SYSOUT=*
000042 //SYSIN DD *
000043      REORG
000044        TABLESPACE MKTAXLU.DSN8S90C
000045          COPYDDN(C001)
000046          SHRLEVEL CHANGE
000047          FASTSWITCH YES
- - -   -   -   -   -   -   -   -   -   -   -   - - 10 Line(s) not Displayed
000058          UPDATE ALL
000059      REORG
000060        TABLESPACE MKTAXLU.DSN8S90P
000061          COPYDDN(C002)
000062          SHRLEVEL CHANGE
000063          FASTSWITCH YES
000064          UNLOAD CONTINUE
- - -   -   -   -   -   -   -   -   -   -   -   -  - 9 Line(s) not Displayed
000074          UPDATE ALL
000075      REORG
000076        TABLESPACE MKTAXLU.DSN8S90R
000077          COPYDDN(C003)
000078          SHRLEVEL CHANGE
000079          FASTSWITCH YES
000080          UNLOAD CONTINUE
```

Move Table Admin Panel Work and Code Generated – 400 Tables

UDCL/MOVE 400 TABLES
Panel Effort and Code Needed

66K Lines of Code

25K Lines of Code

16,000 Keystrokes

16,000 Keystrokes

70000
60000
50000
40000
30000
20000
10000
0

UDCL

Move Table

■ Panel Keystrokes   ■ Lines of Code needed

Move Table Administration options

- Administration tool panel navigation for small/medium numbers
- Generate-and-tape for large numbers
  - Administration products can help with Table$\rightarrow$PBG match up

Rename

Create '%_NEW' in PBG, SQL Insert, Rename

- Create PBG (DSSIZE, MAXPARTIONS) for each Table in MTTS
- Create Tables/Indexes with '_NEW' suffix using original DDL into PBG
- Insert into _NEW (Select * from original)
- Rename Tables and Indexes
  - Original to _OLD
  - _NEW to Original

Create '%_NEW' in PBG, SQL Insert, Rename Pros

- Any pre FL508 Db2 release

- No Drop

- High availability

- All of the Admin can be cooked up ahead of time
  - SQL and Renames at execution

- Good for pre-FL508 SIMPLE environments with
  - very little data
  - few indexes
  - no views
  - No: Clones, Accelerator tables, Triggers, MQT, Temporal, ……

Create '%_NEW' in PBG, SQL Insert, Rename Cons

- Rename is fussy…..
  - -750 SQL Code if you have:
  - Views, synonyms, accelerator, archive, res limit table, clone, triggers, MQT, Temporal, Column mask, row permission
- Convert Synonyms to Alias prior (was on your list anyway)
- Views must be saved/dropped/recreated
- Logging issues with large numbers of Rows

Create '%_NEW' in PBG, SQL Insert, Rename Effort Graph

- Medium code effort
  - TS DDL
  - TB/IX DDL
  - Simple 1 line SQL
  - Rename

- Effort increases exponentially with Views, Synonyms, Indexes

Create '%_NEW' in PBG, SQL Insert, Rename Effort Graph – 400 Tables

Rename Effort Graph
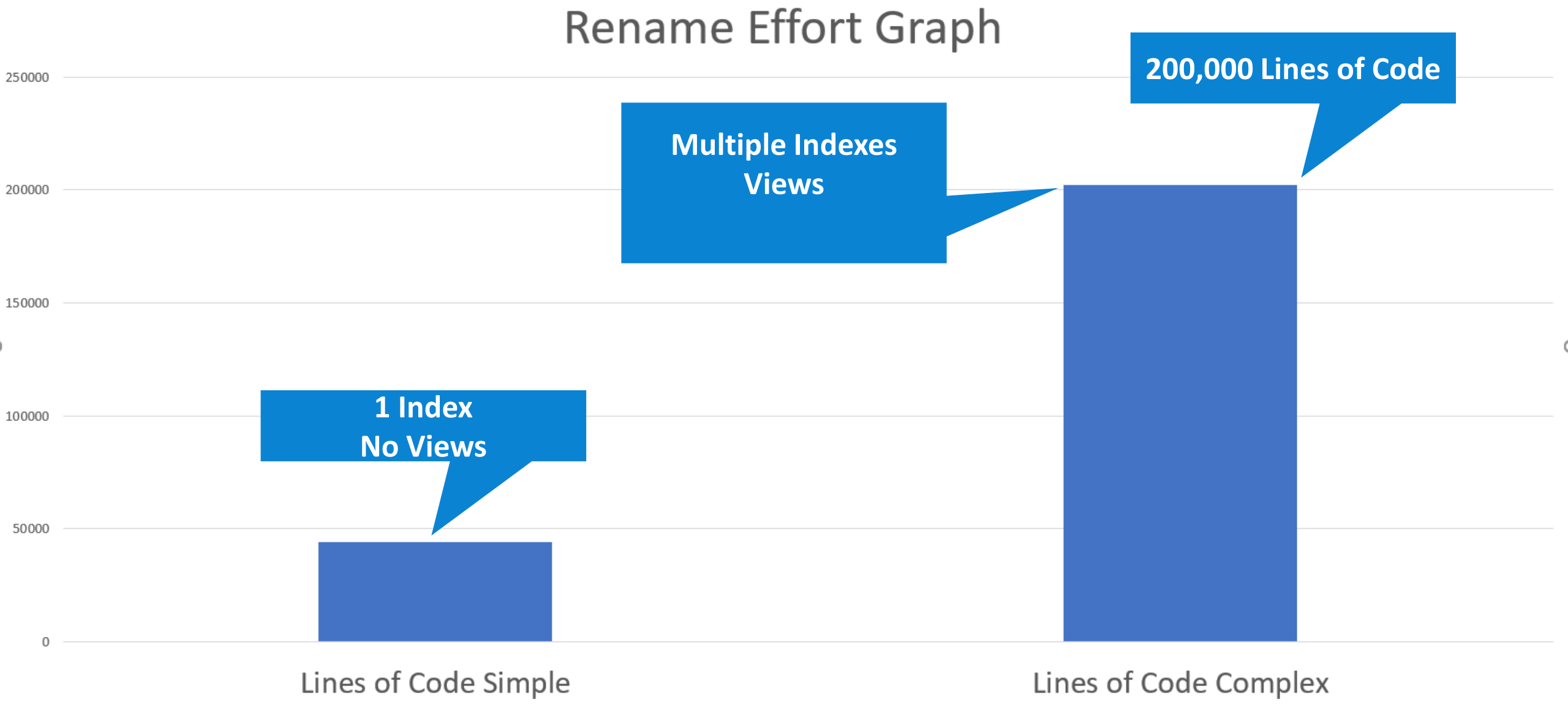
Create '%_NEW' in PBG, SQL Insert, Rename options

- Generate-and-tape for very specific pre FL508 use cases

BMC Change Manager DML

Change Manager DML Process

- Edit Change Manager DML to do conversion to MTTS
  - Samples provided in product library
- IMPORT into Change Manager
- Analyze to get Worklist
- Run!

What is Change Manager DML?

- **DML-like language to SPECIFY mass changes on a grand scale**

- **Simply IMPORT then ANALYZE and EXECUTE**

QUICK EXAMPLE:
Convert Simple single-table Tablespaces to PBG

UPDATE TABLESPACE
SET
   MAXPARTITIONS = 5 ◄── **ALTER To PBG**
WHERE
   DBNAME LIKE 'SXP%' ◄── **SCOPE**
   AND NTABLES = 1 ◄── **Single TB/TS**
   AND PARTITIONS = 0 ◄── **SIMPLE TS**
;

Change Manager DML Architecture
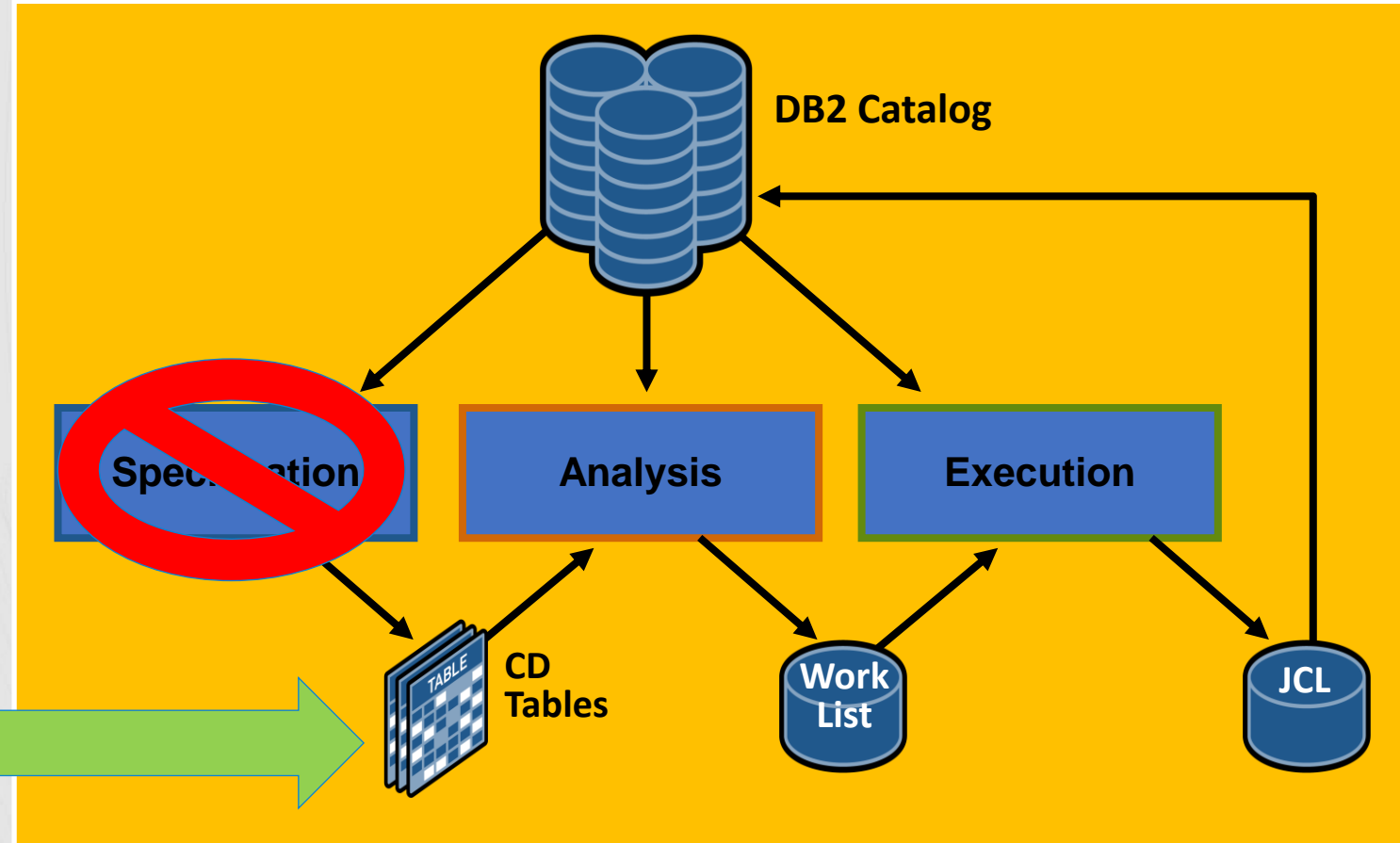
Why Change Manager DML?

- ## Saves hours of panel work

- ## Avoid Generate and Tape

  - CM DML is One-stop-shopping
  - ANALYSIS Creates all the code – verified to run

Index of Samples HLQ.BMCCNTL(ACMDMLIX)

```
EDIT          BMCSCD.RTE121C.BMCCNTL(ACMDMLIX) - 01.00         Columns 00001 00072
Command ===> _____  Scroll ===> CSR
000169 ACMDMLUI
000170    The example DML in this file turns on table access control for all
000171    tables in a database.
000172 ACMDMLUJ
000173    The example DML in this file enables all row permissions for a
000174    table.
000175
000176 SPE2010 (BQU2829)
000177
000178 ACMDMLUL
000179    The example DML in this file converts partition-by-range table spaces
000180    with absolute page numbering, table-controlled partitioned table space
000181    and index-controlled partitioned table spaces to partition-by-range
000182    table spaces with relative page numbering.
000183
000184 SPE2104 (BQU3285)
000185
000186 ACMDMLUM
000187    The example DML in this file creates a new partition-by-growth table
000188    space for each table in a multi-table table space.
000189    After you edit the DML statement, you can use
000190    CHANGE MANAGER to import it.
```

Process:
1. Copy HLQ.BMCCNTL(ACMDML*) to your own library
2. Edit member and save
3. Create ALTER Workid in Change Manager
4. Import your DML to Workid
5. Analyze (Review Worklist!)
6. Execute to implement changes

Process Example: Simple TS to PBG

```
EDIT         SLSTXM.IDUG.DML(PBG1) - 01.00          Columns 00001 00072
Command ===> _____        Scroll ===> CSR
****** ************************** Top of Data **************************
000001 --   The example DML in this file converts
000002 --   nonpartitioned simple or segmented table
000003 --   spaces to partition-by-growth table spaces.
000004 --   After you edit the DML statement, you can use CHANGE
000005 --   MANAGER to import it.
000006 --
000007 UPDATE  TABLESPACE
000008 SET
000009    MAXPARTITIONS = 5
000010 WHERE
000011    DBNAME LIKE 'S%'
000012    AND NTABLES = 1
000013    AND PARTITIONS = 0
000014 ;
```

Process Example: Simple TS to PBG


```
DJJ1 ------------------------------ WORKID Action Menu ------------------
Command ===> █

Type a specific WORKID or type a wildcard pattern for a selection list.

WORKID . . . SLSTXM.SIMP2PBG
              (Example  A.B to narrow search to a specific WORKID,
                        A*.B* for all WORKIDS like this pattern.)


Select an action.
2    1.  List
     2.  Create a new WORKID
     3.  Import CDL, DDL or DML to a WORKID
     4.  Specify Db2 definitions
     5.  Analyze WORKID and create a worklist
     6.  Execute WORKID worklist created by Analysis
     7.  Edit a WORKID
     8.  Browse a WORKID
     9.  Delete a WORKID
    10.  View Execution Status of a WORKID
    11.  Convert Alter WORKID to CDL
```

Process Example: Simple TS to PBG

Process Example: Simple TS to PBG

```
DJJ1 ------------------------- WORKID Action Menu ------------- WORKID ADDED
Command ===>


Type a specific WORKID or type a wildcard pattern for a selection list.

WORKID . . .   SLSTXM.SIMP2PBG
               (Example  A.B to narrow search to a specific WORKID,
                         A*.B* for all WORKIDS like this pattern.)


Select an action.

3    1.  List
     2.  Create a new WORKID
     3.  Import CDL, DDL or DML to a WORKID
     4.  Specify Db2 definitions
     5.  Analyze WORKID and create a worklist
     6.  Execute WORKID worklist created by Analysis
     7.  Edit a WORKID
     8.  Browse a WORKID
     9.  Delete a WORKID
    10.  View Execution Status of a WORKID
    11.  Convert Alter WORKID to CDL
```

Process Example: Simple TS to PBG

Process Example: Simple TS to PBG

```
DJJ1 -------------------------- Import JCL Processing Interface ------------
Command ===>


WORKID  . . . . . . :   SLSTXM.SIMP2PBG


Specify Dataset Names
   JCL . . . . . . . .   'SLSTXM.BMC.JCL(SIMP2PBG)'
   DML . . . . . . . .   'SLSTXM.IDUG.DML(PBG1)'
   Diagnostics . . . .   SYSOUT




Select processing options.   Then press Enter to continue.
S Edit DML
S Create JCL
S Edit JCL
_ Submit JCL
```

Process Example: Simple TS to PBG

```
SDSF EDIT    SLSTXMI  (JOB29028) ALUPRINT           Columns 00001 00072
Command ===>                                        Scroll ===> CSR
000073                  Import DML Impact Report - Summary
000074
000075              Summary Statistics
000076      Objects       Update   Delete   Migrate   Like      Total
000077      -------       ------   ------   -------   -------   -----
000078
000079      Stogroup         0       0         0        0          0
000080
000081      Database         0       0         0        0          0
000082
000083      Tablespace     175       0         0        0        175
000084
000085      Tablepart      175       0         0        0        175
000086
000087      Table            0       0         0        0          0
000088
- - - - - - - - - - - - - - - - - - - - - - - - 35 Line(s) not Displayed
000124
000125      Totals         350       0         0        0        350
000126
000127
```

Process Example: Simple TS to PBG

```
 Action  Object          DBNAME.NAME
 ------- --------------- --------------------
 UPDATE  TABLESPACE       SAMACMDB.BMCBTRTX
 UPDATE  TABLESPACE       SAMACMDB.BMCBVWTX
 UPDATE  TABLESPACE       SAMARM.BMCARMC4
 UPDATE  TABLESPACE       SAMARM.BMCARMCX
 UPDATE  TABLESPACE       SAMARM.BMCJOBRS
 UPDATE  TABLESPACE       SAMLOGDB.SAMLOGTS
 UPDATE  TABLESPACE       SENTRY.VKSAGBK2
 UPDATE  TABLESPACE       SP0IVPDB.SP0IVPTS
 UPDATE  TABLESPACE       SP1IVPDB.SP1IV1TS
 UPDATE  TABLESPACE       SP1IVPDB.SP1IV2TS
 UPDATE  TABLESPACE       SP1IVPDB.SP1IVPTS
 UPDATE  TABLESPACE       SP2IVPDB.SP2IV1TS
 UPDATE  TABLESPACE       SP2IVPDB.SP2IV2TS
 UPDATE  TABLESPACE       SP2IVPDB.SP2IVPTS
 UPDATE  TABLESPACE       SP8IVPDB.SP8IVPTS
 UPDATE  TABLESPACE       SPAACMDB.BMCBTRTX
 UPDATE  TABLESPACE       SPAACMDB.BMCBVWTX
 UPDATE  TABLESPACE       SPAAMEX.CDBTS
 UPDATE  TABLESPACE       SPAANTHM.ANTHMTS
 UPDATE  TABLESPACE       SPAARM.BMCARMC4
 UPDATE  TABLESPACE       SPAARM.BMCARMCX
 UPDATE  TABLESPACE       SPAARM.BMCJOBRS
 UPDATE  TABLESPACE       SPAARM1.BMCARMC4
```

```
 UPDATE TABLESPACES:
 DML          Dbname.Name
 -------      ----------------
   1-0        SAMACMDB.BMCBTRTX
 Changed      Type                    from <blnks>
                                      to      G
 Changed      DSSize                  from 0
                                      to    4194304
 Changed      MaxPartitions            from 0
                                        to     5
   1-1        SAMACMDB.BMCBVWTX
 Changed      Type                    from <blnks>
                                      to      G
 Changed      DSSize                  from 0
                                      to    4194304
 Changed      MaxPartitions            from 0
                                        to     5
   1-2        SAMARM.BMCARMC4
 Changed      Type                    from <blnks>
                                      to      G
 Changed      DSSize                  from 0
                                      to    4194304
 Changed      MaxPartitions            from 0
                                        to     5
   1-3        SAMARM.BMCARMCX
```

Process Example: Simple TS to PBG

```
DJJ1 ------------------------------ WORKID Action Menu -----------------------------
Command ===> █

Type a specific WORKID or type a wildcard pattern for a selection list.

WORKID . . .   SLSTXM.SIMP2PBG
               (Example  A.B to narrow search to a specific WORKID,
                         A*.B* for all WORKIDS like this pattern.)


Select an action.
5    1. List
     2. Create a new WORKID
     3. Import CDL, DDL or DML to a WORKID
     4. Specify Db2 definitions
     5. Analyze WORKID and create a worklist
     6. Execute WORKID worklist created by Analysis
     7. Edit a WORKID
     8. Browse a WORKID
     9. Delete a WORKID
    10. View Execution Status of a WORKID
    11. Convert Alter WORKID to CDL
```

Conversion Worklist – Simple to PBG Example

```
EDIT          SLSTXM.DJJ1.SIMP2PBG              Columns 00001 00072
Command ===> █                                  Scroll ===> CSR
008450                    BUSTIMESENSITIVE(NO)   -
008451                    SYSTIMESENSITIVE(NO)   -
008452                    ARCHIVESENSITIVE(NO)   -
008453                    EXPLAIN(NO)
008454
008455    REBIND TRIGGER PACKAGE ( -
008456    DSNIBMTS.CONNECTINFOCONSTRAINT +
008457    ) -
008458                    PLANMGMT(EXTENDED)
008459
008460    REBIND TRIGGER PACKAGE ( -
008461    SLSSXP.CR_ORDERS_TR +
008462    ) -
008463                    APREUSE(   )           -
008464    BUST    SENSITIVE(NO)   -
008465    TIMESENSITIVE(NO)   -
008466                    ARCHIVESENSITIVE(NO)   -
008467                    EXPLAIN(NO)
008468
008469    REBIND TRIGGER PACKAGE ( -
008470    SLSSXP.CR_ORDERS_TR +
008471    ) -
008472                    PLANMGMT(EXTENDED)
008473
008474 -SYNC 054900 END OF REBIND PLANS SECTION
```

175 Panel Edits Saved
7300 Keystrokes saved
8400 Lines of Code Generated

Multi Table/Tablepace
to
1 Table/Tablespace PBG

Using Unload/Drop/Create/LOAD
(PRE Db2 V12 FL508)

HLQ.BMCCNTL(ACMDMLUM)

Multi TB/TS to Single TB/TS UDCL

```
EDIT            SLSTXM.IDUG.DML(MTT2ST2) - 01.00           Columns 00001 00072
Command                                                                    CSR
******                                                                  ******
000001                                                                  table
000002    SET NAME = SUBSTR(CHAR(SYSIBM.SYSTABLES.NAME),1,4)
000003    CONCAT SUBSTR(DIGITS(SYSIBM.SYSTABLES.OBID),2,4)
000004
000005
000006
000007
000008  JOIN SYSIBM.SYSTABLES
000009  SET NAME = 'TS' CONCAT DIGITS(SYSIBM.SYSTABLES.OBID)
000010  , DSSIZE           = 4
000011  , MAXPARTITIONS = 5
000012  , DEFINE           = 'N'
000013  WHERE SYSIBM.SYSTABLESPACE.DBNAME     LIKE 'B%' --SPECIFY EXISTING DB NAME
000014  AND SYSIBM.SYSTABLESPACE.DBNAME   = SYSIBM.SYSTABLES.DBNAME
000015  AND SYSIBM.SYSTABLESPACE.NAME     = SYSIBM.SYSTABLES.TSNAME
000016  AND SYSIBM.SYSTABLES.TYPE         = 'T'
000017  AND SYSIBM.SYSTABLESPACE.NTABLES  > 1 --          number of tables in TS
000018  ;
000019
```

Multi TB/TS to Single TB/TS UDCL

```
EDIT        SLSTXM.IDUG.DML(MTT2ST2) - 01.00          Columns 00001 00072
Command ===>                              Scroll ===> CSR
000016 AND SYSIBM.SYSTABLES.TYPE           = 'T'
000017 AND SYSIBM.SYSTABLESPACE.NTABLES   > 1 -- specify number of tables in TS
000018 ;
000019
000020 LIKE TABLEPART
000021 JOIN SYSIBM.SYSTABLES, SYSIBM.SYSTABLESPACE
000022 SET TSNAME = 'TS' CONCAT DIGITS(SYSIBM.SYSTABLES.OBID)
000023 WHERE SYSIBM.SYSTABLESPACE.DBNAME LIKE 'B%' --SPECIFY EXISTING DB NAME
000024 AND SYSIBM.SYSTABLEPART.DBNAME    = SYSIBM.SYSTABLES.DBNAME
000025 AND SYSIBM.SYSTABLEPART.TSNAME    = SYSIBM.SYSTABLES.TSNAME
000026 AND SYSIBM.SYSTABLEPART.DBNAME    = SYSIBM.SYSTABLESPACE.DBNAME
000027 AND SYSIBM.SYSTABLEPART.TSNAME    = SYSIBM.SYSTABLESPACE.NAME
000028 AND SYSIBM.SYSTABLES.TYPE = 'T'
000029 AND SYSIBM.SYSTABLESPACE.NTABLES > 1        ify number of tables in TS
000030 AND PARTITION=0                          -- includes only non-PT TS
000031 ;
000032
```

Multi TB/TS to Single TB/TS UDCL


```
EDIT          SLSTXM.IDUG.DML(MTT2ST2) - 01.00              Columns 00001 00072
Command ===>                                              Scroll ===> CSR
000029 AND SYSIBM.SYSTABLESPACE.NTABLES > 1 -- specify number of tables in TS
000030 AND PARTITION=0                          -- includes only non-PT TS
000031 ;
000032
000033 UPDATE TABLE
000034 JOIN SYSIBM.SYSTABLESPACE
000035 SET TSNAME = 'TS'   CONCAT DIGITS(SYSIBM.SYSTABLES.OBID)
000036 WHERE SYSIBM.SYSTABLESPACE.DBNAME  LIKE 'B%  --SPECIFY EXISTING DB NAME
000037 AND SYSIBM.SYSTABLES.DBNAME   = SYSIBM.SYSTABLESPACE.DBNAME
000038 AND SYSIBM.SYSTABLES.TSNAME   = SYSIBM.SYSTABLESPACE.NAME
000039 AND SYSIBM.SYSTABLES.TYPE       = 'T'
000040 AND SYSIBM.SYSTABLESPACE.NTABLES > 1          fy number of tables in TS
000041 ;
```

Multi TB/TS to Single TB/TS UDCL

```
SDSF OUTPUT DISPLAY SLSTXMI    JOB26371   DSID    102 LINE 116
COMMAND INPUT ===> █
              Fri May   6 12:18:58 2022


              Summary Statistics
Objects          Update     Delete     Migrate     Like         Total
-------          ------     ------     -------     -------      -------

Stogroup              0          0           0           0            0

Database              0          0           0           0            0

Tablespace            0          0           0         320          320

Tablepart           320          0           0           0          320

Table               320          0           0           0          320

Column                0          0           0           0            0

Foreignkey            0          0           0           0            0

Index                 0          0           0           0            0
```

Multi TB/TS to Single TB/TS UDCL

```
SDSF OUTPUT DISPLAY SLSTXMI   JOB26387   DSID
COMMAND INPUT ===> █
 Action  Object        DBNAME.NAME
 -------  ------------  ---------------------
LIKE     TABLESPACE    BMCACAA1.ACAREPOS
LIKE     TABLESPACE    BMCACAA1.ACAREPOS
LIKE     TABLESPACE    BMCACAA1.ACAREPOS
LIKE     TABLESPACE    BMCACAA1.ACAREPOS
LIKE     TABLESPACE    BMCACAA1.ACAREPOS
LIKE     TABLESPACE    BMCACAA1.ACAREPOS
LIKE     TABLESPACE    BMCACAA1.ACAREPOS
LIKE     TABLESPACE    BMCACAB1.ACAREPOS
LIKE     TABLESPACE    BMCACAB1.ACAREPOS
LIKE     TABLESPACE    BMCACAB1.ACAREPOS
LIKE     TABLESPACE    BMCACAB1.ACAREPOS
LIKE     TABLESPACE    BMCACAB1.ACAREPOS
LIKE     TABLESPA
LIKE     TABLESPA
```

```
 Action  Object       Creator.Name
 -------  -----------  -------------------
UPDATE    TABLE        BMCTSTDB.ACT
UPDATE    TABLE        BMCTSTDB.EACT
UPDATE    TABLE        BMCTSTDB.EDEPT
UPDATE    TABLE        BMCTSTDB.EEMP
UPDATE    TABLE        BMCTSTDB.EEPA
UPDATE    TABLE        BMCTSTDB.EMPPROJACT
UPDATE    TABLE        BMCTSTDB.EPROJ
UPDATE    TABLE        BMCTSTDB.EPROJACT
UPDATE    TABLE        BMCTSTDB.PROJ
UPDATE    TABLE        BMCTSTDB.PROJACT
```

```
SDSF OUTPUT DISPLAY SLSTXMI   JOB26387   DSID    102 LINE 497
COMMAND INPUT ===> █
 Action  Object       Part  Dbname    Name
 -------  -----------  ----  --------  ---------
UPDATE    TABLEPART     0    BMCACAA1  TS00003
UPDATE    TABLEPART     0    BMCACAA1  TS00004
UPDATE    TABLEPART     0    BMCACAA1  TS00005
UPDATE    TABLEPART     0    BMCACAA1  TS00006
UPDATE    TABLEPART     0    BMCACAA1  TS00007
UPDATE    TABLEPART     0    BMCACAA1  TS00008
UPDATE    TABLEPART     0    BMCACAA1  TS00009
```

Multi TB/TS to Single TB/TS UDCL Worklist

Multi TB/TS to Single TB/TS UDCL Worklist

```
EDIT        SLSTXM.DAGA.ST2MTUDC                Columns 00001 00
Command ===> █_____        Scroll ===> C
001194 *********************************************************
001195 -UNLI 005350
001196    TEMPLATE SYRC
001197         DSN 'SLSTXM.ST2MTUDC.T170703.SR000001'
001198         UNIT SYSDA
001199
001200         UNLOAD FROM TABLE AC105610.CDB_RTS_CRITERIA
001201               HEADER NONE
001202    (
001203     TYPE
001204   , "NAME"
001205   , PARTITION
001206   , REMARKS
001207   , TS_REORG_NONE
001208   , TS_REORG_CHKINDEX
001209   , TS_REORG_FORCECOPY
001210   , TS_REORG_MASSDEL
001211   , TS_REORG_INSERTS
001212   , TS_REORG_DELETES
001213   , TS_REORG_UPDATES
001214   , TS_REORG_INSDELUPD
```

Multi TB/TS to Single TB/TS UDCL

```
DSLIST          SLSTXM.IDUG.ST2MTUDC              Columns 00001 00072
Command ===>                                      Scroll ===> CSR
008583 -SQL   023650 DROP TABLE        BMCPRDDB.EDEPT
008584 -SQL   023700 DROP TABLE        BMCPRDDB.EEMP
008585 -SQL   023750 DROP TABLE        BMCPRDDB.EEPA
008586 -SQL   023800 DROP TABLE       █BMCPRDDB.EMPPROJACT
008587 -SQL   023850 DROP TABLE        BMCPRDDB.EPROJ
008588 -SQL   023900 DROP TABLE        BMCPRDDB.EPROJACT
008589 -SQL   023950 DROP TABLE        BMCPRDDB.PROJ
008590 -SYNC 035150 END OF DROP OBJECTS SECTION
008591 ****************************************************************
008592 -SETS 047450 SET CURRENT SQLID = 'CSTCXN'
008593 -SQL   047500 CREATE  TABLESPACE TS00023 IN BMCTSTDB
008594               MAXPARTITIONS 5
008595               USING STOGROUP DSN8G100
008596               PRIQTY      -1
008597               SECQTY      -1
008598               PCTFREE     5   FOR UPDATE 0
008599               CCSID EBCDIC
008600               BUFFERPOOL BP0
008601               LOCKSIZE    ROW
008602               CLOSE       NO
008603               SEGSIZE     4
008604               DSSIZE      4G
008605
008606 -SQL   037550 CREATE  TABLESPACE HRT00031 IN BVSMXF10
```

Multi TB/TS to Single TB/TS Old School

WORKLIST

```
DSLIST        SLSTXM.IDUG.ST2RTUDC               Columns 00001 00072
Command ===> █                                   Scroll ===> CSR
017895 -SETA 094450 SET CURRENT SCHEMA = DEFAULT
017896 -SQL  094500 CREATE TABLE BMCPRDDB.ACT_OLD
017897  (
017898   ACTNO
017899       SMALLINT NOT NULL
017900  , ACTKWD
017901       CHAR(6) NOT NULL
017902  , ACTDESC
017903       VARCHAR(20) NOT NULL
017904  )
017905                       CCSID EBCDIC
017906   IN BMCPRDDB.TS00011
017907
017908 -SETS 094550 SET CURRENT SQLID = 'BMCADM'
017909 -SQL  094600 GRANT  DELETE
017910                     ,INSERT
017911                     ,SELECT
017912                     ,UPDATE
017913              ON TABLE BMCPRDDB.ACT_OLD
017914              TO PUBLIC
017915
017916 -SETS 094650 SET CURRENT SQLID = USER
```

Multi TB/TS to Single TB/TS UDCL Worklist

```
EDIT        SLSTXM.DAGA.ST2MTUDC                    Columns 00001 0007
Command ===> █                                      Scroll ===> CSR
031459  **************************************************************
031460 -LOAD 146100
031461    TEMPLATE SYRC
031462        DSN 'SLSTXM.ST2MTUDC.T170703.SR000001'
031463        UNIT SYSDA
031464    TEMPLATE SYDS
031465        DSN 'SLSTXM.RTMAN94.RTSCRIT.T170703.SD000001'
031466        UNIT SYSDA
031467
031468                LOAD DATA  REPLACE
031469                INDDN SYRC
031470                ERRDDN SYSER001
031471                DISCARDS 0
031472                DISCARDDN SYDS
031473                EBCDIC CCSID(37,0,0)
031474                WORKDDN SYSUT001
```

Multi TB/TS to Single TB/TS UDCL WORKLIST

Multi Table/Tablepace to PBG Using Move Table (Db2 V12 FL508)

HLQ.BMCCNTL(ACMDMLUM) again.......

Move Table Requirements

- ## Be at FL508
- ## Be at BMC SPE 2104 (April 2021)
- ## Change NOMOVETB to MOVETB in Analysis overrides
- ## Use IBM Reorg
- ## Move Table requires:
  - MAXPARTITIONS = 1
  - Define NO

Multi TB/TS to Single TB/TS – Move Table

```
EDIT        SLSTXM.IDUG.DML(MTT2ST2) - 01.01          Columns 00001 00072
Command ===> ▮                                        Scroll ===> CSR
******  ********************************** Top o       *******************
000001  -- The example DML in this file crea          n-by-growth table
000002  -- space for each table in a multi-           
000003  -- After you edit the DML statement           
000004  -- CHANGE MANAGER to import it.
000005  --
000006
000007  LIKE TABLESPACE
000008  JOIN SYSIBM.SYSTABLES
000009  SET NAME = 'TS' CONCAT DIGITS(SYSIBM.SYSTABLES.OBID)
000010  , DSSIZE          = 4
000011  , MAXPARTITIONS = 1
000012  , DEFINE          = 'N'
000013  WHERE SYSIBM.SYSTABLESPACE.DBNAME LIKE 'B%' --SPECIFY EXISTING DB NAME
000014  AND SYSIBM.SYSTABLESPACE.DBNAME    = SYSIBM.SYSTABLES.DBNAME
000015  AND SYSIBM.SYSTABLESPACE.NAME      = SYSIBM.SYSTABLES.TSNAME
000016  AND SYSIBM.SYSTABLES.TYPE          = 'T'
000017  AND SYSIBM.SYSTABLESPACE.NTABLES   > 1 -- specify number of tables in TS
000018  ;
000019
```

Maxpart =1
Define = 'N'

Multi TB/TS to Single TB/TS – Move Table

```
SDSF OUTPUT DISPLAY SLSTXMI    JOB26371    DSID    102 LINE 116
COMMAND INPUT ===> ▮
              Fri May   6 12:18:58 2022


              Summary Statistics
Objects          Update    Delete    Migrate    Like        Total
-------          ------    ------    -------    -------      ------

Stogroup            0         0         0          0            0

Database            0         0         0          0            0

Tablespace          0         0         0         320          320

Tablepart          320        0         0          0           320

Table              320        0         0          0           320

Column              0         0         0          0            0

Foreignkey          0         0         0          0            0

Index               0         0         0          0            0
```

Multi TB/TS to Single TB/TS – Move Table

```
--------------------------- Analysis Worklist Options ---------------------
Command ===> █

Type information. Then press Enter to continue.

Specify allocation parameters for new datasets.
   Dataset      Unitname     Volume     Priqty     Secqty     Alloc Unit
   Worklist     SYSDA                      15          5       Tracks




Specify optional Global AUTHID.
   Global AUTHID  .  .

Specify sync point frequency.
   Frequency  .  .  .  .  10

Analyze for ROLE as OWNER.
   ROLEOWN  .  .  .  .  .  N

Use spanned records.                    Use ALTER TABLESPACE MOVE TABLE.
   SPANNEDRECS  .  .  .  N                  MOVETB .  .  .  Y

Commands:  HELP END
```

Multi TB/TS to Single TB/TS – Move Table

```
----------------------------------- Analysis Reorg Options ------------------------
Command ===>

Type information. Then press Enter to continue or PF12 for previous panel.

Reorg Product . . . . .  1  1.  IBM REORG
                            2.  BMC REORG PLUS
                            3.  BMC AMI Reorg


Perform Reorg
     S  Whenever Reorg is applicable
        Only if Reorg is required (Object in Reorg Pending status)
          Reorg for pending DDL (Object in Advisory Reorg Pending status)



Perform Online Reorg
     S  Generate SHRLEVEL CHANGE (Online) Reorg when applicable

When SHRLEVEL CHANGE not applicable or not requested:
     S  Generate SHRLEVEL REFERENCE Reorg
        Generate SHRLEVEL NONE Reorg


Commands:   HELP END PREVIOUS
```

Multi TB/TS to Single TB/TS – Move Table Worklist

Multi TB/TS to Single TB/TS – Move Table Worklist


```
Command ===> _____                          Scroll ===> CSR
000279 -SYNC 000850 END OF CREATE TABLESPACE SECTION
000280 ***********************************************************
000281 -SETS 000900 SET CURRENT SQLID = 'CSTCXN'
000282 -SQL   000950 ALTER   TABLESPACE BMCTSTDB.DSN8S10P
000283                       MOVE TABLE BMCTSTDB.ACT
000284               TO TABLESPACE BMCTSTDB.TS00011
000285
000286 -SQL   001000 ALTER   TABLESPACE BMCTSTDB.DSN8S10P
000287                       MOVE TABLE BMCTSTDB.EMPPROJACT
000288               TO TABLESPACE BMCTSTDB.TS00018
000289
000290 -SQL   001050 ALTER   TABLESPACE BMCTSTDB.DSN8S10P
000291                       MOVE TABLE BMCTSTDB.PROJ
000292               TO TABLESPACE BMCTSTDB.TS00022
000293
000294 -SQL   001100 ALTER   TABLESPACE BMCTSTDB.DSN8S10P
000295                       MOVE TABLE BMCTSTDB.PROJACT
000296               TO TABLESPACE BMCTSTDB.TS00023
000297
000298 -SQL   001150 ALTER   TABLESPACE BMCTSTDB.DSN8S10R
000299                       MOVE TABLE BMCTSTDB.EACT
000300               TO TABLESPACE BMCTSTDB.TS00013
000301
000302 -SQL   001200 ALTER   TABLESPACE BMCTSTDB.DSN8S10R
000303                       MOVE TABLE BMCTSTDB.EDEPT
000304               TO TABLESPACE BMCTSTDB.TS00014
```

Multi TB/TS to Single TB/TS – Move Table Worklist

```
Command ===>                                    Scroll ===> CSR
007727
007728     TEMPLATE DCPYLOCP
007729          DSN 'SLSTXM.DSN8S10P.P000.LP000025.&SN.'
007730          UNIT SYSDA
007731
007732              REORG TABLESPACE BMCTSTDB.DSN8S10P
007733              UNLDDN SYRC
007734                   COPYDDN (DCPYLOCP)
007735             SORTKEYS
007736             SORTNUM  32
007737             SORTDEVT SYSDA
007738             SORTDATA LOG NO
007739             SHRLEVEL CHANGE
007740             MAXRO 0
007741             MAPPINGTABLE DELQA.MAP_TBL
007742             FASTSWITCH YES
007743
007744 -SYNC 041300 REORG OF TABLESPACE BMCTSTDB.DSN8S10P COMPLETE
007745 -REOR 041350
007746    TEMPLATE SYRC
007747          DSN 'SLSTXM.ST2MTUDC.T122450.SR000026'
007748          UNIT SYSDA
```

Multi TB/TS to Single TB/TS – Move Table Worklist

```
DSLIST          SLSTXM.IDUG.ST2MTMVT              Columns 00001 00
Command ===>                                       Scroll ===> C
011919     REBIND TRIGGER PACKAGE ( -
011920     ASUB1SC.SDDD2 +
011921     ) -
011922                 PLANMGMT(EXTENDED)
011923
011924     REBIND              ( -
011925     ASUB1SC             +
011926     ) -
011927                 NE)            -
011928                 SITIVE(NO)    -
011929                 SITIVE(NO)    -
011930                 SITIVE(NO)    -
011931             EXPLAIN(NO)
011932
011933     REBIND TRIGGER PACKAGE ( -
011934     ASUB1SC.SDDD1 +
011935     ) -
011936                 PLANMGMT(EXTENDED)
011937
011938  -SYNC 072700 END OF REBIND PLANS SECTION
```

12,000 Lines of Worklist

Increase MAXPARTITIONS from 1 to 5

```
EDIT        SLSTXM.IDUG.DML(PBMAX5) - 01.01              Columns 0
Command ===>                                               Scroll
****** *********************************** Top of Data ***********************
000001 --
000002 --   SET DBNAME TO SAME USED FOR CONVERSTION TO SINGLE TABLE
000003 --
000004 UPDATE   TABLESPACE
000005 SET
000006    MAXPARTITIONS = 5
000007 WHERE
000008    DBNAME LIKE 'B%'
000009    AND MAXPARTITIONS = 1
000010 ;
```

Change Manager DML Pros

- Supports UDCL and Move Table
- Scales
  - 5 minutes Admin time for 50 or 5000 tables
- No Panel work
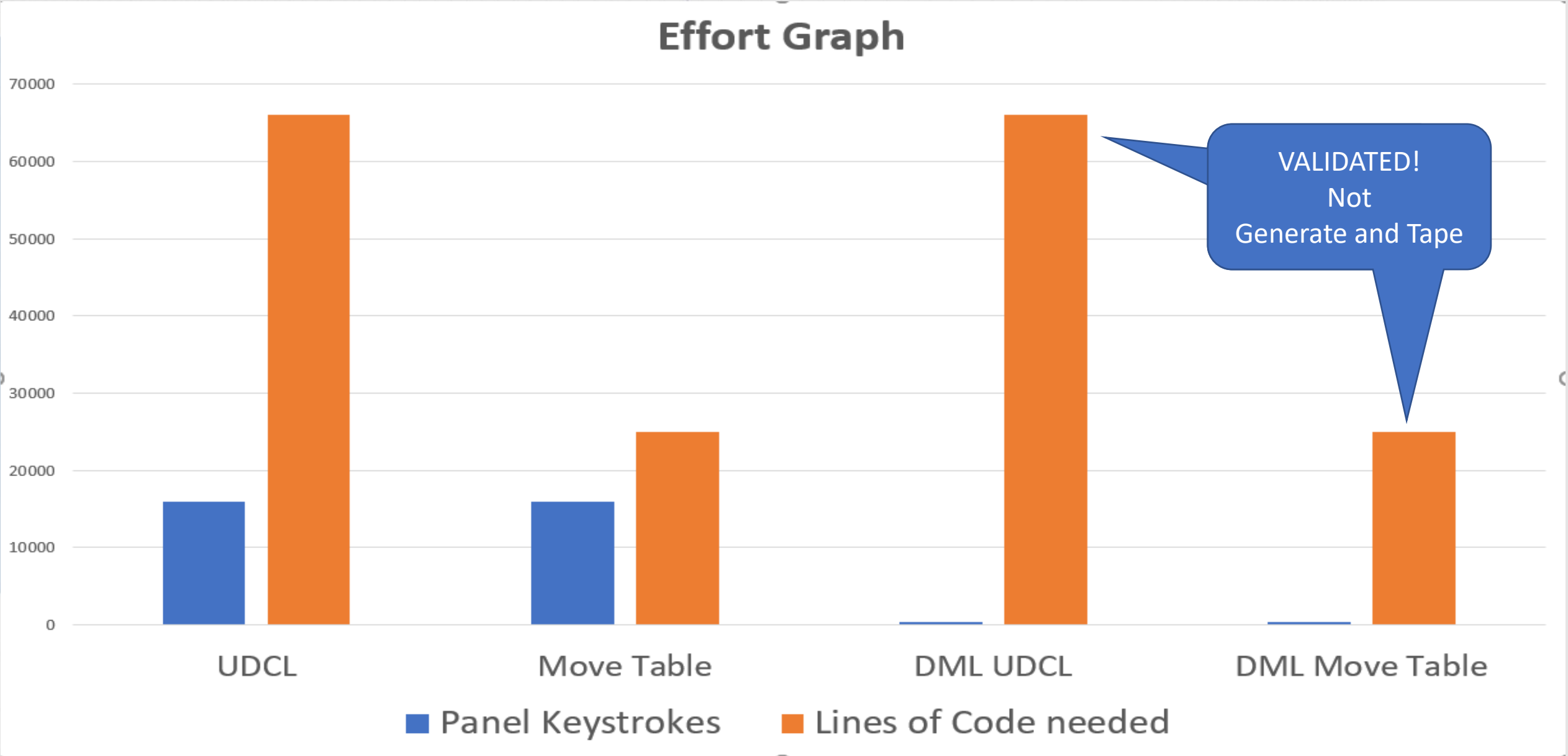- No Generate-and-tape
- No Errors – Analysis checks it out

Change Manager DML Cons

- Exclusive feature to BMC Change Manager

Effort Graph – 400 Tables

With Great Power Comes Great Responsibility

- Scope Change Manager DML to what your systems and change windows can handle (Where clause)

- 500,000 lines of code might be too much…..

Post Conversion Processing

- Alter to MAXPARTIONS > 1 if you used Move Table

- Copy/Reorg and other maintenance on new PBGs

- Drop empty Tablespaces
  - Retire old TS utility jobs

Recommendations

- Change Manager users
  - Use DML to Convert at any time regardless of Db2 FL
    - UDCL works!
    - Move Table if FL508
  - If MTTS Tables are 7x24 and pre FL508
    - Move non-7x24 now with Change Manager DML and UDCL with 'where' clause
    - Wait until FL508 and use Change Manager DML and Move 7x24 Tables with 'where' clause
- Other Admin tools….
  - Panel work if must be done prior to FL508 (small to medium numbers of Tables)
  - Rename Process Pre-FL508 if simple environment
  - Wait for FL508 and Generate-and-Tape Move Table
    - Broadcom DB Analyzer and BMC Catalog Manager have template-type support for generating.

Thank You

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