

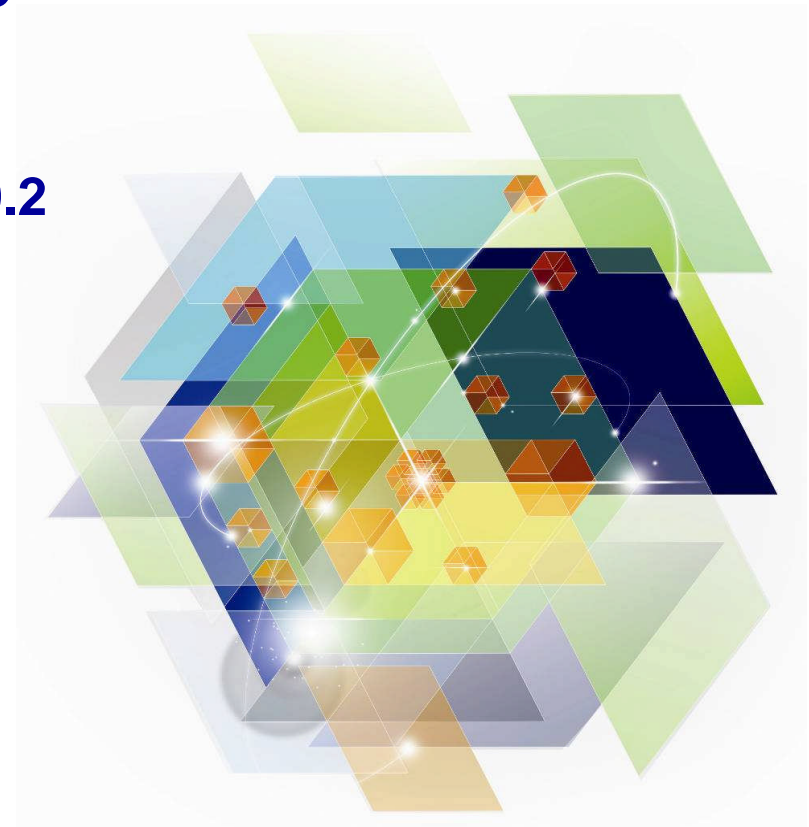


Enhancements to DB2 Administration Tool to Make your DBA Life Easier

DB2 Administration Tool V10.2
DB2 Object Comparison Tool V10.2

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Agenda

- **DB2 Administration Tool V10.2**
 - Table Details
 - Package Details
 - Change Management

- **DB2 Object Comparison Tool V10.2**
 - Save Compare results
 - Ignoring changes
 - Excluding objects
 - Masking enhancements

- **Customize using Tools Customizer for z/OS**

DB2 Administration Tool Enhancements

Catalog Navigation

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
DB2 Admin ----- DSNB System Catalog ----- 12:06
Option ==> t_

Object options:
AO - Authorization options
G - Storage groups
D - Databases
S - Table spaces
T - Tables, views, and aliases
V - Views
A - Aliases
Y - Synonyms
X - Indexes
C - Columns
N - Constraints
DS - Database structures
PDC - DB2 pending definition changes

P - Plans
L - Collections
K - Packages
H - Schemas
E - User defined data types
F - Functions
O - Stored procedures
J - Triggers
Q - Sequences
DSP - DS with plans and packages

DB2 System: DSNB
DB2 SQL ID: J148286

Enter standard selection criteria (Using a LIKE operator, criteria saved):
Name ==> EMP% > Grantor ==> >
Owner ==> DSNB% > Grantee ==> >
In D/L/H ==> > Switch Catalog Copy ==> N (N/S/C)
And/or other selection criteria (option xC shows you columns for option x)
Column ==> > Operator ==> Value ==>

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MA a 02/015

```

- Full set of object and authorization options
- Input fields for common predicate values
- May use LIKE or = predicate operator
- May also “fast path” a catalog navigation query with the “CAT” or “?” primary command
 - Eg. “?T DSNB%.EMP%:”

Catalog Navigation – a typical display

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
DB2 Admin ----- DSN8 Tables, Views, and Aliases ---- Row 1 to 9 of 9
Command ==> Scroll ==> DATA

Commands: GRANT MIG ALL
Line commands:
C - Columns A - Auth L - List X - Indexes S - Table space D - Database
V - Views T - Tables P - Plans Y - Synonyms SEL - Select prototyping
? - Show all line commands

Sel Name Schema T DB Name TS Name Cols Rows Chks C
-----
emp_ * * * * *
EACT DSN81010 T DSN8D10A DSN8S10R 5 0 0
EDEPT DSN81010 T DSN8D10A DSN8S10R 7 0 0
EEMP DSN81010 T DSN8D10A DSN8S10R 16 0 0
EIPA DSN81010 T DSN8D10A DSN8S10R 8 0 0
EMP DSN81010 T DSN8D10A DSN8S10E 14 0 1
EMPPROJACT DSN81010 T DSN8D10A DSN8S10P 6 0 0
EMP_PHOTO_RESUME DSN81010 T DSN8D10L DSN8S10B 5 4 0
EPROJ DSN81010 T DSN8D10A DSN8S10R 10 0 0
EPROJACT DSN81010 T DSN8D10A DSN8S10R 7 0 0
***** END OF DB2 DATA *****

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```

- Primary commands perform on each object in the list
- Line commands perform on one object in the list
- Filter fields to hide objects in the list
- May offer dozens of operations from a given catalog navigation panel

Table Details – “DET”

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
DB2 Admin ----- DSN81010 Details for object(s) ----- 12:14
Command ==> _____ Scroll ==> CSR
Commands: SAVE

_ Details for table (label) : DSN81010.EMP

- _Table information
  Table schema . . . : DSN81010      Table name . . . : EMP
  Created by . . . : DB2ADM         Created . . . : 2012-05-03-16.36.40.837159
  Table space name . . : DSN8S10E   Database name . . : DSN8D10A
  Object ID for table : 18          DB ID for database : 264
  Maximum row length : 107         Primary key OBID . : 21
  Number of columns . : 14         Primary key columns: 1
  Validate procedure . : N/A       EDIT procedure name: DSN8EAE1
  Parent relations . . : 1         Child relations . . : 3
  Auditing . . . . . : AUDIT NONE   Status . . . : X - Unique constraint
  Data capture . . . : NO          Altered . . . : 2012-05-03-16.36.40.837159
  Restrict on DROP . . : NO        Check constraints . : 1
  Encoding scheme . . : E - EBCDIC Col. in part. key . : 0
  Check flag . . . . : No         VOLATILE table . . : No
  Created in DB2 Ver . : 0 - DB2 V10 Dependent MQTS . . : 0
  Data version . . . : 0
  Table owner . . . . : DSN81010
  Owner type . . . . : Auth ID     Append specified . : No
  Clone table schema . :           Clone table name . . :
  Access control . . . : ' ' - Not enforced
  Number of hash cols : 0
  Versioning Schema . . :           Versioning Table . . :

  Statistical data . . : RUNSTATS timestamp: 2012-06-12-04.06.58.395306
  Row count . . . . . : 0          (Float fmt) : 0.0000000000000000E+00
  Occupied pages . . . : 0          (Float fmt) : 0.0000000000000000E+00
  Pct TS pages w/rows : 0          % compressed: 0
  Average row length . : 0          KBytes DASD : 2.8800000000000000E+03

  Associated remarks :

_ Column information for table : DSN81010.EMP

  Column Name      Col No Col Type Length  Scale Null Def FP   Col card
  -----
  *ADBPD
  a

```

- Table information is followed by columns, indexes and aliases
- Information is displayed in “sections”
- Fully scrollable display
- FIND and RFIND locate a value
- SAVE writes to a file

Table Details – “DET”

```

Session A - [43 x 80]
DB2 Admin ----- DSN81010.EMP ----- 12:18
Command ==>
Commands: SAVE

_ Details for table (label) : DSN81010.EMP
_ Table information
_ Column information for table : DSN81010.EMP

  Column Name      Col No Col Type Length  Scale Null Def FP   Col card
-----
EMPNO              1  CHAR      6         0  N    N   N     0
FIRSTNME          2  VARCHAR  12         0  N    N   N     0
MIDINIT           3  CHAR      1         0  N    N   N     0
LASTNAME          4  VARCHAR  15         0  N    N   N     0
WORKDEPT          5  CHAR      3         0  Y    Y   N     0
PHONENO           6  CHAR      4         0  Y    Y   N     0
HIREDATE          7  DATE      4         0  Y    Y   N     0
JOB               8  CHAR      8         0  Y    Y   N     0
EDLEVEL           9  SMALLINT  2         0  Y    Y   N     0
SEX              10  CHAR      1         0  Y    Y   N     0
BIRTHDATE        11  DATE      4         0  Y    Y   N     0
SALARY           12  DECIMAL   9         2  Y    Y   N     0
BONUS            13  DECIMAL   9         2  Y    Y   N     0
COMM             14  DECIMAL   9         2  Y    Y   N     0

_ Index information for table : DSN81010.EMP

  Index Name      Index Schema  U  Cols G D L M  First Key  Full Key
-----
XEMP1            DSN81010 P    1  Y N N N    0          0
  Column Name      Order Period
-----
EMPNO              A

XEMP2            DSN81010 D    1  N N N N    0          0
  Column Name      Order Period
-----

```

- Sections can be collapsed or expanded individually with '-' and '+' line commands

or

- ZOOM primary command/PFKey
 - Cursor sensitive
 - Command line collapses all sections
 - On a section collapses just that section and its “children”

Table Details – “DET”

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
ADBPD min ----- DSNB Details for object(s) ----- 14:41
Command ==> _____ Scroll ==> CSR
Commands: SAVE

_ Details for table (label) : J148286.B
_ Table information
_ Column information for table : J148286.B

  Column Name      Col No Col Type Length  Scale Null Def FP   Col card
  -----
  A                1 CHAR      1      0 Y   Y   N     -1
  B                2 DECIMAL   1      0 N   N   N     -1
  L1               3 VARCHAR   4042   0 Y   Y   N     -1
  C                4 CHAR      1      0 Y   Y   N     -1

_ Details for table (label) : J148286.A
_ Table information
_ Column information for table : J148286.A

  Column Name      Col No Col Type Length  Scale Null Def FP   Col card
  -----
  AXXX             1 CHAR      1      0 Y   Y   N     -1
  BX               2 DECIMAL   2      0 N   N   N     -1
  L1               3 VARCHAR   4041   0 Y   Y   N     -1
  CX               4 CHAR      2      0 Y   Y   N     -1

***** Bottom of data *****
MA a 02/015

```

- DET as a primary command shows multiple tables
- Two tables are shown
- “Table information” sections have been collapsed

Package Details – “DET”

```

Session A - [43 x 80]
DB2 Admin ----- DSNAPackages ----- Row 1 to 29 of 51
Command ==> Scroll ==> DATA

Commands: BIND REBIND FREE VERSIONS GRANT ALL PLANMGMT
Line commands: DP - Depend A - Auth T - Tables V - Views X - Indexes
S - Table spaces Y - Synonyms Q - Sequences RB - Rebind F - Free B - Bind
BC - Bind copy EN - Enab/disab con PL - Package lists P - Local plans
GR - Grant I - Interpret SQ - SQL in package LP - List PLAN_TABLE
VE - Versions D - Databases RO - Role DET - Package details

S  Collection      Name      Owner      Version (trunc)  V  I  V  O  Quali-  R  E  D
  *          *          *          *          *  *  *  *  *  *      L  X  R
-----
det ADBA2MPE         ADB0      J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  C  N
ADB27AC          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  C  N
ADB27SP          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  N
ADB2CHK          J351156    V10.2.0.0000000  B  S  Y  Y  ADBA2PAR C  N
ADB2CID          J351156    V10.2.0.0000000  B  S  Y  Y  ADBA2PAR C  N
ADB2CON          J351156    V10.2.0.0000000  B  S  Y  Y  J351156 C  N
ADB2GET          J351156    V10.2.0.0000000  B  S  Y  Y  J351156 C  N
ADB2PRP          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  C  N
ADB2REM          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  C  N
ADB2REP          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  C  N
ADB2RER          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  C  N
ADB2RES          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  C  N
ADB2RET          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  C  N
ADB2REY          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  C  N
ADB2RGC          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  N
ADB2RIP          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  N
ADB2SQL          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  N
ADB2WCL          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  N
ADB2ZP           J351156    V10.2.0.0000000  B  S  Y  Y  J351156 C  N
ADB2ZPV          J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  C  N
ADB8SQL          J351156    V10.2.0.0000000  B  S  Y  Y  ADBA2PAR C  N
ADB9SQL          J351156    V10.2.0.0000000  B  S  Y  Y  ADB      C  N
ADBASW           J351156    V10.2.0.0000000  B  S  Y  Y  SYSIBM  C  N
ADBC0            J351156    V10.2.0.0000000  B  S  Y  Y  ADBA2PAR C  N
ADBCCM           J351156    V10.2.0.0000000  B  S  Y  Y  ADBA2PAR C  N
ADBCDTW          J351156    V10.2.0.0000000  B  S  Y  Y  ADBA2PAR C  N
ADBCEST          J351156    V10.2.0.0000000  B  S  Y  Y  ADBA2PAR C  N
ADBCIMV          J351156    V10.2.0.0000000  B  S  Y  Y  ADBA2PAR C  N
ADBCMPC          J351156    V10.2.0.0000000  B  S  Y  Y  ADBA2PAR C  N
*ADB21K
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```

- Show detail information for a package and its SQL statements – all from one display
- DET line command against a package
- DET primary command on a list of packages

Package Details – “DET”

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
DB2 Admin ----- DSNAP Details for object(s) ----- 12:26
Command ==> _____ Scroll ==> CSR
Commands: SAVE

_ Details for package : ADB0                in collection : ADBA2MPE

_ Package information
Package type . . . . . : Created by BIND PACKAGE
Version . . . . . : V10.2.0.0000000
Authorization ID of owner . . . : J351156
Owner type . . . . . : Auth ID
Authorization ID of creator . . : J351156
Created timestamp . . . . . : 2012-07-28-08.53.25.050520
Latest BIND timestamp . . . . . : 2012-07-28-08.53.25.050520
Version under which package bound : V10
Qualifier for unqualified SQL . : SYSIBM
Operative status of package . . : Package is valid and operative
Resource and authorization check : At BIND time
Size of the base section (bytes) : 6800 (in EDM pool during execution)
Average DML section size (bytes) : 30851 (loaded when needed during exec)
Package bound with EXPLAIN . . . : No
SQLERROR specified at BIND time : No - SQLERROR(NOPACKAGE) specified
BIND or REBIND from remote loc. : No - (RE)BIND was from a local system
Remote packages creation method :
Source of the package . . . . . : ADB.VA2APAR.SADDBDRM
Number of enabled/disabled conn. : 0
Data concurrency . . . . . : B - not required
  Effect on blocking . . . . . : Allow blocking for ambiguous cursors
DEGREE of I/O parallelism . . . : 1 - parallel I/O inhibited
Group member that performed BIND :
Dynamic SQL rules . . . . . : Not specified - use rules for the plan
Re-optimize SQL at execution time : No - access path determined at BIND time
Defer prepare . . . . . : Not specified - inherited from the plan
Keep prepared dynamic SQL stmts : No - are destroyed at COMMIT
Protocol for 3 part names . . . : D - uses DRDA
Function resolved at . . . . . : 2012-07-28-08.53.25.045997
Optimizer hint identifier . . . :
Encode CCSID . . . . . : 37
Write group buffer pool pages . : Inheriting the value from the plan
ROUNDING option used on last bind : Round Half Even
Concurrent Access . . . . . : Not specified - inherit from DB2 ZPARM
xADBDP
MA a 02/015

```

- Package information is followed by SQL statements
- Same navigational capability as table details:
 - Fully scrollable display
 - SAVE writes to a file
 - FIND and RFIND locate a value
 - Collapse and expand sections

Package Details – “DET”

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
ADBPD min ----- DSNB Details for object(s) ----- 16:01
Command ==> _____ Scroll ==> CSR
Commands: SAVE

SQL path for resolving UDT,UDF,SP:

Precompiler related information:
Timestamp of precompilation . . . : 2012-07-26-22.19.26.895780
Consistency token in hex . . . . : 193DB24715AFA908
SQL escape character . . . . . : ' (apostrophe)
Decimal point character . . . . . : . (period)
Host program language . . . . . : PL/I
Mixed character set . . . . . : N
Decimal 31 used . . . . . : No
Katakana . . . . . : No

Resource allocation information:
Resources are released . . . . : At COMMIT
Isolation level . . . . . : Cursor stability

_ SQL statements in package: ADBA2MPE.ADB0.V10.2.0.0000000
_ SQL in statement: 710
CONNECT
TO
   :P_LOCATION                               Char(16)
_ SQL in statement: 730
CONNECT
_ SQL in statement: 733
GET
DIAGNOSTICS
CONDITION
1
   :PPPVRRM                               Var Char(8)
   = DB2_PRODUCT_ID
_ SQL in statement: 737
DECLARE
C_TAB
*ADBPD
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```

- SQL statements are formatted
- Host variable names are substituted into the statement
- Host variable data type information is included for informational purposes

Change Management

```
Session A - [43 x 80]
File Edit View Communication Actions Window Help
DB2 Admin ----- Change Management (CM) ----- 12:39
Option ==> _

1 - Manage changes
2 - Manage masks
3 - Manage ignores
4 - Manage versions
5 - Manage ID table
6 - Report changes
7 - Manage exclude specifications
8 - Manage ignore changes specifications

DB2 System: DSNB
DB2 SQL ID: J148286
CM Owner : ADB

*ADB2C
MA a 02/014
```

- “CM” is a set of capabilities for managing changes to DB2 objects
- Requires Admin and Object Compare
- Helps manage the change lifecycle
- Helps to coordinate changes

Change Management Processes

- Register – DBA-initiated modifications to DB2 objects
- Analyze – Product decides how to implement the change
- Run – Job to implement the change

- Recover – Job to undo the change
- Promote – Combine changes together
- Import – Copy changes to other systems

CM – Capture a “base version”

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
ADB2GEX1 ----- CM - Run a Change ----- 12:20
Command ==>

Change . . . : J148286.BACKUPDDL DEMO
Specify the following for run change:

Data set information:
  PDS for jobs . . . . . 'J148286.DSNA.RUN.JCL'
  Prefix for data sets . . J148286

Change reporting options . . . . . NO (Yes/No)
Generate base version before run . . auto (No, Auto, User)
Generate base version after run . . auto (No, Auto, User)
Authorization Switch ID . . . . . (SQLID to connect, blank, <NONE>)
SECADM Authorization ID . . . . .

MA a 15/044

```

- Base version is an snapshot of the object definitions at a point in time
- Use normal CM processes –
 - Register
 - Analyze
- At RUN time, decide to create a base version:
 - Before a change
 - After the change

CM - Enhancements to rebuild object DDL

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
ADB2C41 n ----- CM - Versions ----- Row 1 from 3
Command ==> Scroll ==> DATA

Line commands:
CH - Changes PR - Promote VS - Version scope DEL - Delete U - Update
PT - Toggle protected status I - Details on version DDL -Generate DDL

Sel          ID T Owner      Name          Comment
-----
          24 B J148286   BV1
ddl _        219 B J148286   AUTO:2012-06-04-12.21.09.85152
          220 B J148286   AUTO:2012-06-04-12.21.13.82581
***** END OF DB2 DATA *****

*ADB2C41
MA a 12/006

```

- Base versions are held in DB2 tables
- DDL line command produces a file with statements from the base version
- The statements will be written to a data set of your choosing
- Use ADBTEP2 to run the statements

Agenda

- **DB2 Administration Tool V10.2**
 - Table Details
 - Package Details
 - Change Management

- **DB2 Object Comparison Tool V10.2**
 - Save Compare results
 - Ignoring changes
 - Excluding objects
 - Masking enhancements

- **Customize using Tools Customizer for z/OS**

DB2 Object Comparison Tool

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
Compare ----- DB2 Object Comparison Tool Menu ----- 13:06
Option ==> _

1 - Specify compare source (new)          Specification Status:
2 - Specify compare target (old)         DDL file specified
3 - Specify compare masks                DB2 catalog extract specified
4 - Specify ignores                      Mask specified
5 - Generate compare job                 Ignore changes specified
                                         Generated

W - Walk through steps 1 - 5 in sequence
V - Generate job to extract version file from source only

R - Reset all
RS - Reset Source
RT - Reset Target

S - Save dialog
M - Manage/Restore dialog
MC - MultiCompare
MR - Manage saved compare results

*xGOCMENU
MA a 02/014

```

- Compare one set of objects to another
 - Source
 - Target

- Mask to reconcile naming differences

- Ignore to ignore certain changes

- Differences are written to a CHANGES file

- Extensive Reporting

OC – Save Compare Report

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
GOC5 re ----- Generate Compare Jobs -----
Option ==>

Specify the following for DB2 Object Comparison Tool:
More: +

Worklist information:
Worklist name . . . . . TEST      (also used as middle qualifier in DSNs)

Compare options:
Suppress DROP of objects . YES      (Yes/No)
Suppress DROP of columns . NO       (Yes/No)
Suppress adding columns . NO       (Yes/No)
Run SQLID . . . . .                (Blank, an SQLID, or <NONE>)
Run Validate . . . . . N           (Validate, None)
Allow implicit drop of
excluded objects . . . . .         (Yes/No)

Change reporting options . YES      (Yes/No)
Save compare results . . . . . YES  (Yes/No)

Data set information:
PDS for jobs . . . . . OC.JCL
Prefix for data sets . . . . . J148286
Changes file data set name.
Member name . . . . .             (if Changes file is an existing PDS)

Options:
Generate online . . . . . NO       (Yes/No)
Single compare job . . . . . YES    (Yes/No)
Member name . . . . . COMPARE     (default COMPARE )
Generate apply jobs . . . . . YES   (Yes, No, or (Delta) Change)
Generate one job . . . . . YES     (Yes, No, or (Per) Process)
Member prefix . . . . . APPLY     (default APPLY )
As work statement list . NO        (Yes/No to append to work stmt list)
Use customized util opts . YES     (Yes/No)
Content of apply job(s) . ALL      (All, DDL)
Unload method . . . . . U         (Unload, Parallel unload, HPU)
Generate templates. . . . . NO     (Yes/No)
Stop on conversion error. NO       (Yes/No)
Use DEFER YES . . . . . NO        (Yes/No)
Allow rotate parts . . . . . NO    (Yes/No)
Retain GENERATED ALWAYS:
For ROWID . . . . . NO           (Yes/No)

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```

- Write the contents of the REPORT DD into DB2 tables
- Dialogs exist to display the report
- Line commands and primary commands to exploit the information from the report

OC – Save Compare Report

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
GOC5 re ----- Generate Compare Jobs -----
ADB2C22 n ----- CM - Save Compare Results ----- 1
Command ==>

Owner . . . J148286 > (Optional, default is J148286, ? to lookup)
Name . . . CHANGE TO PRODTABLE > (Required, ? to lookup)
Comment . . . >
Eligible for auto-delete . . _ (number of days, blank for no auto-delete)

Options:
Generate online . . . . . NO (Yes/No)
Single compare job . . . . YES (Yes/No)
Member name . . . . . COMPARE (default COMPARE )
Generate apply jobs . . . YES (Yes, No, or (Delta) Change)
Generate one job . . . . YES (Yes, No, or (Per) Process)
Member prefix . . . . . APPLY (default APPLY )
As work statement list . NO (Yes/No to append to work stmt list)
Use customized util opts YES (Yes/No)
Content of apply job(s) . ALL (All, DDL)
Unload method . . . . . U (Unload, Parallel unload, HPU)
Generate templates . . . . NO (Yes/No)
Stop on conversion error. NO (Yes/No)
Use DEFER YES . . . . . NO (Yes/No)
Allow rotate parts . . . . NO (Yes/No)
Retain GENERATED ALWAYS:
For ROWID . . . . . NO (Yes/No)
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```

- Name each report to be saved
- Reports can be saved indefinitely or for a certain number of days

OC – Save Compare Report

```
Session A - [43 x 80]
File Edit View Communication Actions Window Help
GOCMENU ----- DB2 Object Comparison Tool Menu ----- 12:32
Option ==> mr_

1 - Specify compare source (new)          Specification Status:
2 - Specify compare target (old)         DB2 catalog extract specified
3 - Specify compare masks                DB2 catalog extract specified
4 - Specify ignores                       None specified
5 - Generate compare job                  Using defaults
                                           Generated

W - Walk through steps 1 - 5 in sequence
V - Generate job to extract version file from source only

R - Reset all
RS - Reset Source
RT - Reset Target

S - Save dialog
M - Manage/Restore dialog
MC - MultiCompare
MR - Manage saved compare results
```

- Saved reports are written to DB2 tables
- New option in Compare to manage saved compare results

OC – Saved Compare Reports

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
ADBPCR in ----- Manage Saved Compare Results ----- Row 1 to 20 of 20
Command ==> Scroll ==> DATA

Line commands:
U - Update DEL - Delete S - Show summary I - Details on results
RPT - Compare Report

Sel Owner      Name                Eligible for auto-delete  Comment
*          *
-----
rpt OWN12      ANA12                2012-05-28                NEW INSERTED SAVE RES
REKHA      TEST1                ?                          ?
REKHA      TEST2                ?                          ?
VNDRG      TEST3                ?                          ?
VNDRG      TEST5                ?                          ?
PEDRO      PSVD24884            2012-06-24                TEST
VNDRG      TSTEST1              2012-07-18                TABLESPACE TEST1
VIJAYAK    SAVE_COMPARE_RUN3    2012-07-20                COMPARE RUN 3 - UPD D
VIJAYAK    SAVE_RESULTS3        ?                          ?
VIJAYAK    SAVE_COMPARE_RUN1    2012-07-14                COMPARE RUN 1 - UPDAT
OWN1       ANA1                  2012-05-25                NEW INSERTED SAVE RES
OWN2       ANA2                  2012-05-26                TABLES
OWN3       ANA3                  2012-05-25                MQT TABLE
OWN4       ANA4                  2012-05-25                HISTORY TABLE
VIJAYAK    SAVE_COMPARE_RUN2    2012-07-24                COMPARE RUN 2 - UPD D
OWN5       ANA5                  2012-05-25                REFERENTIAL CONSTRAIN
OWN6       ANA6                  2012-05-25                REFERENTIAL CONSTRAIN
s_  OWN7       ANA7                  2012-05-26                REFERENTIAL CONSTRAIN
OWN9       ANA9                  2012-05-26                TABLES ONLY
OWN10      ANA10                2012-05-27                NEW INSERTED SAVE RES
***** END OF DB2 DATA *****
MA a 28/003

```

- Update, delete, show details on the saved report
- RPT line command to view the detail report
- S line command to look at only a summary

OC – Detail Compare Report

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
ADBPGR n ----- DSNAP Compare Report ----- 12:34
Command ==> _____ Scroll ==> CSR

Compare analysis report for: 'OWN12','ANA12'
Commands: CONTINUE IGNOREALL RESETALL
Line commands:
  I - Ignore change  R - Reset

Sel S Report
-----

Table VNDRG.TBSRC not found on target
  New Table VNDRG.TBSRC will be added
  Authorizations for Table VNDRG.TBSRC will be copied from source

Table VNDRG.TB1 not found on target
  New Table VNDRG.TB1 will be added

- Compare table source(VNDRG.TB2) and target(VNDRG.TB2)
  Column RECNUM
  (A)Type changed from SMALLINT to INTEGER
  Tables have identical column lists
  Table will be altered

- Compare table source(VNDRG.TB23367) and target(VNDRG.TB23367)
  Column LAHMANID
  (A)Type changed from VARCHAR(12) to VARCHAR(20)
  (D)Nulls/default changed from NOT NULL to WITH DEFAULT NULL
  Column DATE_YYYY
  (A)Type changed from SMALLINT to INTEGER
  (D)Column TEAM_NAME added
  Table VNDRG.TB23367 is partitioned and will be dropped by dropping tabl
  Table will be recreated
  Table data will not be converted
  Not eligible for FORMAT INTERNAL processing
  New clone Table VNDRG.TBCL23367 will be added

***** Bottom of data *****
MA a 02/015

```

- RPT shows the same information as the REPORT DD
- Details of each attribute being changed
- Same navigational capability as table/package details:
 - Fully scrollable display
 - SAVE writes to a file
 - FIND and RFIND locate a value
 - Collapse and expand sections

OC – Summary Compare Report

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
ADBPCRS n ----- CM - Compare Results ----- Row 1 to 6 of 6
Command ==> _ Scroll ==> DATA

Compare results for: 'OWN7'..'ANA7'
Commands: RPT VERSION SRCEX TGTEX SHOWSOURCE
Line commands:
EX - Exclude EXS - Exclude from source EXT - Exclude from target

Sel 0 Target Target Compare
* * Schema Name Additional Info Action *
-----
TB VNRG TCHILD Altered ?
TB VNRG TPARENT Altered ?
RL VNRG TCHILD Added ?
RL VNRG TCHILD Added ?
RL VNRG TCHILD Dropped ?
RL VNRG TCHILD Dropped ?
***** END OF DB2 DATA *****
MA a 02/015

```

- Summary report shows which objects are being changed and how implemented
- SHOWSOURCE to toggle between source and target object names
- RPT to view the detailed report

OC – Too many changes being found?

- **OC compares two objects and identifies differences**
 - Differences are implemented as schema changes

- **What if you do not want to implement one or more of the changes?**
 - Modify the inputs to avoid the difference
 - Classic ignore option ignores an attribute change for all objects
 - **New, “Ignore Changes” specification**

- **Ignore Changes specification – more granular**
 - Can ignore a specific change to a table
 - Can ignore a specific change to all or many tables
 - Can use wild-cards to cover many tables

- **Ignored changes specification are held in DB2 tables**
 - Ignored Changes Specification = “IC Spec”
 - Can reuse an IC Spec for different compare runs

OC – Ignore Changes

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
ADBPCRR n ----- DSNB Compare Report ----- 12:42
Command ==> continue_ Scroll ==> CSR

Compare analysis report for: 'OWN12','ANA12'
Commands: CONTINUE IGNOREALL RESETALL
Line commands:
I - Ignore change R - Reset

Sel S Report
-----

Table VNDRG.TBSRC not found on target
New Table VNDRG.TBSRC will be added
Authorizations for Table VNDRG.TBSRC will be copied from source

Table VNDRG.TB1 not found on target
New Table VNDRG.TB1 will be added

i Compare table source(VNDRG.TB2) and target(VNDRG.TB2)
- Column RECNUM
- (A)Type changed from SMALLINT to INTEGER
- Tables have identical column lists
- Table will be altered

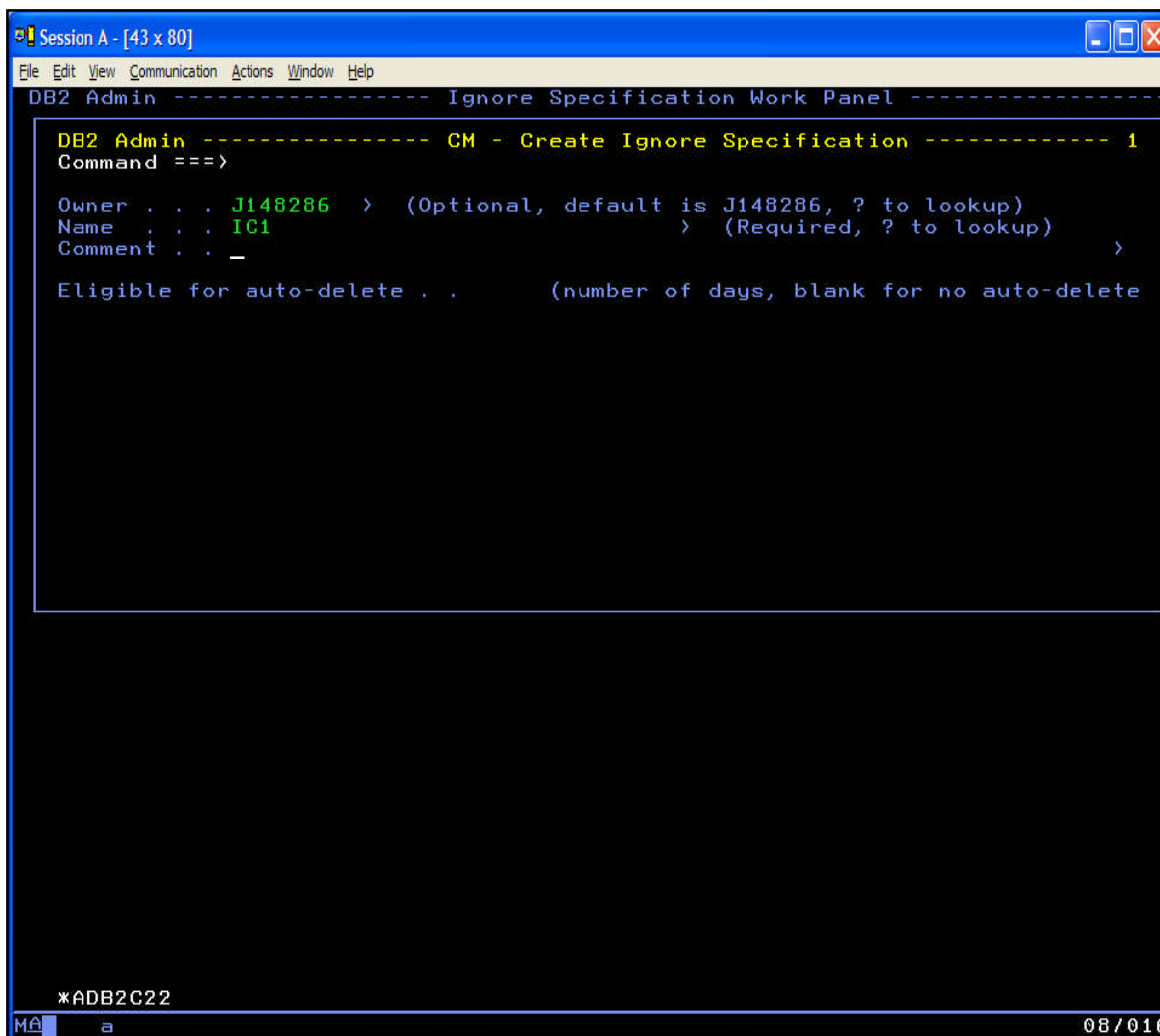
- Compare table source(VNDRG.TB23367) and target(VNDRG.TB23367)
- Column LAHMANID
- (A)Type changed from VARCHAR(12) to VARCHAR(20)
- (D)Nulls/default changed from NOT NULL to WITH DEFAULT NULL
- Column DATE_YYYY
i (A)Type changed from SMALLINT to INTEGER
- (D)Column TEAM_NAME added
- Table VNDRG.TB23367 is partitioned and will be dropped by dropping tabl
- Table will be recreated
- Table data will not be converted
- Not eligible for FORMAT INTERNAL processing
- New clone Table VNDRG.TBCL23367 will be added

***** Bottom of data *****
MA a 02/023

```

- Use the saved compare detail report
- Use the I line command to :
 - Ignore all changes to a table
 - Ignore a specific change to a table
- CONTINUE saves the “ICSpec”

OC – Ignore Changes



The screenshot shows a terminal window titled 'Session A - [43 x 80]' with a menu bar (File, Edit, View, Communication, Actions, Window, Help). The main window is 'DB2 Admin - Ignore Specification Work Panel'. Inside, a dialog box titled 'DB2 Admin - CM - Create Ignore Specification' is open. The dialog contains the following text:

```
DB2 Admin ----- CM - Create Ignore Specification ----- 1
Command ==>

Owner . . . J148286 > (Optional, default is J148286, ? to lookup)
Name . . . IC1 > (Required, ? to lookup)
Comment . . . _ >

Eligible for auto-delete . . . (number of days, blank for no auto-delete)
```

At the bottom of the terminal, the text '*ADB2C22' is visible, and the status bar shows 'MA a' and '08/016'.

- Name each ignore specification
- ICSpecs can be saved indefinitely or for a certain number of days
- Set up an ICSpec once and reuse it – similar to masking and classic ignores

OC – Ignore Changes

```
Session A - [43 x 80]
File Edit View Communication Actions Window Help
GOCMENU ----- DB2 Object Comparison Tool Menu ----- 12:45
Option ==> 4_

1 - Specify compare source (new)      Specification Status:
2 - Specify compare target (old)     DB2 catalog extract specified
3 - Specify compare masks            DB2 catalog extract specified
4 - Specify ignores                  None specified
5 - Generate compare job              Using defaults
                                      Generated

W - Walk through steps 1 - 5 in sequence
V - Generate job to extract version file from source only

R - Reset all
RS - Reset Source
RT - Reset Target

S - Save dialog
M - Manage/Restore dialog
MC - MultiCompare
MR - Manage saved compare results

MA a 02/015
```

- Ignore Specifications are used in the OC Ignores dialog

OC – Ignore Changes

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
Compare ----- Specify Compare Ignores -----
Option ==>
-----

Ignore Fields Specification:
Owner . . . . . > (? to look up)
Name . . . . . > (? to look up)
Data Set:
  Data Set Name . .
Options:
  Edit Ignore Fields Specification . . . NO (Yes/No)

Ignore Changes Specification:
Display using a saved compare result . . YES (Yes/No)
Saved Compare Results:
  Owner . . . . . OWN12 > (? to look up)
  Name . . . . . ANA12 > (? to look up)

  Owner . . . . . J148286 > (? to look up)
  Name . . . . . IC1 > (? to look up)
  Edit Ignore Changes Specification . . . NO (Yes/No)

*xGOC4
MA a 02/019

```

- Can use both the classic ignores and the new IC Spec
- Specify which ICSpec to use
- Can optionally display and edit an IC Spec “merged” with a compare report

OC – Ignore Changes

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
ADBPCRR n ----- DSNAP Compare Report ----- 12:47
Command ==> _____ Scroll ==> CSR

Compare analysis report for: 'OWN12','ANA12'
Commands: CONTINUE IGNOREALL RESETALL SHOWIGNORES
Line commands:
I - Ignore change R - Reset

Sel S Report
-----
Table VNRG.TBSRC not found on target
New Table VNRG.TBSRC will be added
Authorizations for Table VNRG.TBSRC will be copied from source

Table VNRG.TB1 not found on target
New Table VNRG.TB1 will be added

Compare table source(VNRG.TB2) and target(VNRG.TB2)
Column RECNUM
I (A)Type changed from SMALLINT to INTEGER
Tables have identical column lists
Table will be altered

Compare table source(VNRG.TB23367) and target(VNRG.TB23367)
Column LAHMANID
(D)Nulls/default changed from NOT NULL to WITH DEFAULT NULL
Column DATE_YYYY
I (A)Type changed from SMALLINT to INTEGER
(D)Column TEAM_NAME added
Table VNRG.TB23367 is partitioned and will be dropped by dropping tabl
Table will be recreated
Table data will not be converted
Not eligible for FORMAT INTERNAL processing
New clone Table VNRG.TBCL23367 will be added

***** Bottom of data *****
MA a 02/015

```

- When viewing a compare report with an ICSpec
 - Matched changes that will be ignored are already marked
 - Presents a “what if” view of using an ICSpec against a saved result without rerunning the compare

- Can add more ignores or remove the ignored change as needed

OC – Ignore Changes

- ICSpecs can be managed outside of Compare

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
DB2 Admin ----- Change Management (CM) ----- 13:32
Option ==> 8_

1 - Manage changes
2 - Manage masks
3 - Manage ignores
4 - Manage versions
5 - Manage ID table
6 - Report changes
7 - Manage exclude specifications
8 - Manage ignore changes specifications
    
```

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
DB2 Admin ----- Manage Ignore Changes Specification ----- Row 1 to 1 of 1
Command ==> _
Scroll ==> DATA

Line commands:
U - Update DEL - Delete ICL - Ignore Changes List
I - Details on Ignore Specification

Sel Owner      Name                Eligible for auto-delete  Comment
-----
*          *          *          *
J148286      IC1                  ?
***** END OF DB2 DATA *****
    
```

OC – Too many objects being compared?

- **OC compares two objects and identifies differences**
 - Differences are implemented as schema changes

- **What if more objects than desired or included?**
 - Modify the inputs to remove unwanted objects
 - **New, “Exclude Objects” specification**

- **Exclude objects specification**
 - Can exclude source objects
 - Can exclude target objects
 - Can use wild-cards to exclude many objects

- **Exclude specifications are held in DB2 tables**
 - Can reuse an Exclude Spec for different compare runs

OC – Save Compare Report

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
ADBPCRS n ----- CM - Compare Results ----- Row 1 to 6 of 6
Command ==> _ Scroll ==> DATA

Compare results for: 'OWN7'. 'ANA7'
Commands: RPT VERSION AUTH SRCEX TGTEX SHOWSOURCE
Line commands:
EX - Exclude EXS - Exclude from source EXT - Exclude from target

Sel 0 Target Target Compare
* * Schema Name Additional Info Action *
-----
TB VNRG TCHILD Altered ?
TB VNRG TPARENT Altered ?
RL VNRG TCHILD Added ?
RL VNRG TCHILD Added ?
RL VNRG TCHILD Dropped ?
RL VNRG TCHILD Dropped ?
***** END OF DB2 DATA *****
MA a 02/015

```

- Can populate an Exclude Specification from a Saved Compare summary report
- Summary report shows which objects are being encountered and changed
- EX, EXS and EXT line commands to exclude objects from both or either of the source or target

OC – Exclude Objects

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
GOCMENU ----- DB2 Object Comparison Tool Menu ----- 12:59
Option ==> 1_

1 - Specify compare source (new)           Specification Status:
2 - Specify compare target (old)          DB2 catalog extract specified
3 - Specify compare masks                 DB2 catalog extract specified
4 - Specify ignores                       None specified
5 - Generate compare job                  Ignore changes specified
                                           Generated

W - Walk through steps 1 - 5 in sequence
V - Generate job to extract version file from source only

R - Reset all
RS - Reset Source
RT - Reset Target

S - Save dialog
M - Manage/Restore dialog
MC - MultiCompare
MR - Manage saved compare results

MA a 02/015

```

- Exclude specifications are used in the OC source and target dialogs
- Can exclude source objects, target objects or both

OC – Exclude Objects

```
Session A - [43 x 80]
File Edit View Communication Actions Window Help
GOC1 re ----- Specify Compare Source ----- 15:11
Option ==>

1 - Source is from a DDL file
2 - Source is from the DB2 catalog
3 - Source is from a compare version file

VS - Source is from the DB2 catalog and the objects are selected from
    a version scope

Exclude Specifications:
Exclude Objects . . . YES (Yes/No)
Owner . . . . . VIJAYAK > (Optional, default is SCADCB60, ? to lookup)
Name . . . . . EXSPEC_TGT1 > (Required, ? to lookup)

MA a 15/026
```

- Specify to use an “Exclude Specification” when specifying the source or target objects

OC – Exclude Objects

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
DB2 Admin ----- Change Management (CM) ----- 13:33
Option ==> 7_

1 - Manage changes
2 - Manage masks
3 - Manage ignores
4 - Manage versions
5 - Manage ID table
6 - Report changes
7 - Manage exclude specifications
8 - Manage ignore changes specifications

DB2 System: DSN
DB2 SQL ID: J148286
CM Owner : ADB

Session A - [43 x 80]
File Edit View Communication Actions Window Help
DB2 Admin ----- CM - Manage Exclude Specifications ----- 13:34
Option ==> _

1 - Display exclude specifications
2 - Create an exclude specification

DB2 System: DSN
DB2 SQL ID: J148286

Enter display selection criteria (Using a LIKE operator, criteria saved):
Owner . . . . . >
Name . . . . . >
Created within >
Altered within >
Eligible for delete:
  Within . . . . .
  Next . . . . .

*ADBPC7
MA a
02/014

```

- Exclude specs can be managed outside of Compare

OC – Exclude Objects

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
ADBPG7L n ----- CM - Exclude Objects ----- Row 1 to 2 of 2
Command ==> _ Scroll ==> DATA

Exclude specification lines for "VIJAYAK"."EXSPEC_TGT1"
Commands: CANCEL
Line commands:
I - Insert D - Delete R - Repeat

Sel T Qual Name Column Constraint Auth
* * * * *
-----> -----> -----> ----->
TB VIJAYAK DEPT ?
TB R% A ?
***** END OF DB2 DATA *****

```

- Can specify individual objects
- Can use wild cards to cover multiple objects

OC – Ignore changes and Exclude Objects

- **Ignore changes**
 - Can ignore [all] changes to a set of tables

- **Exclude objects**
 - Can remove objects from participation in the compare run

- **Both enhancements improve productivity**
 - Easily control what gets changed and what does not get changed
 - Reuse the specifications for many compare scenarios

GEN – Exclude Objects

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
ADB2GEN n ----- DSNB Generate SQL from DB2 catalog ----- 13:09
Option ==>

Generate SQL statements for database ADBDCHG          DB2 System: DSNB
                                                    DB2 SQL ID: J148286
                                                    More: +

SQL statement types to be generated from the DB2 catalog:
CREATE DATABASE . . . . . Y (Y,N)   GRANT access ON DATABASE . . . Y (Y,N,A,R)
CREATE TABLESPACE . . . . . Y (Y,N) GRANT access ON TABLESPACE . . N (Y,N,A,R)
CREATE TABLE . . . . . N (Y,N)     GRANT access ON TABLE . . . . N (Y,N,A,R)
CREATE VIEW . . . . . N (Y,N,D)    GRANT access ON VIEW . . . . . N (Y,N,A,R)
CREATE INDEX . . . . . N (Y,N)     ALTER TABLE ADD FOREIGN KEY. . N (Y,N,D)
CREATE SYNONYM . . . . . N (Y,N)    LABEL ON . . . . . N (Y,N)
CREATE ALIAS . . . . . N (Y,N)     COMMENT ON . . . . . N (Y,N)
CREATE TRIGGER . . . . . N (Y,N,D)  REBIND PLAN/PACKAGE . . . . . N (Y,N,D)
CREATE MASK . . . . . Y (Y,N)       ALTER TABLE ACTIVATE CONTROL Y (Y,N)
CREATE PERMISSION . . . . . Y (Y,N)
CREATE STORAGE GROUP . . . . . N (Y,N) GRANT use OF STORAGE GROUP . N (Y,N,A,R)

New names/values for generated SQL: (leave blank to use current values)
Object schema . . . . . > Run SQLID . . . . .
Object grantor . . . . . >
Alloc TS size as . . . . . DEFINED (DEFINED, USED, or ALLOC)
Database name . . . . .
Storage group for TS . . . . . > Storage group for IX . . . . . >
Target DB2 version . . . . . > (Current DB2 version: 1015)
Use Masking . . . . . NO (Yes/No)
Use Exclude Spec . . . . . YES (Yes/No)
Generate catalog stats . . . . . NO (Yes/No/Only)
Target cat qualifier . . . . . > (Default is SYSIBM)
Statistics tables . . . . . ALL (All or Select. Default is All)
Include DB2 pending chgs NO (Yes/No/Alter/Only)

SQL output data set
Add to a WSL . . . . .
Data set name . . . . .
Data set dispos . . . . .
Execution mode . . . . .
Commit statements . . . . .
DB2 defaults hand . . . . .
Prompt to run SQL . . . . .

DB2 Command output
MA a
  
```

- GEN can also use an Exclude Specification
- DDL for objects in the Exclude Spec are omitted from the DDL file

```

DB2 Admin ----- Specify Exclude Specification -----
Exclude Specification Table Entry:
Owner . . . . . > (? to look up)
Name . . . . . > (? to look up)
Options:
Edit Exclude . . . . .
Spec . . . . . NO (Yes/No)
  
```

Masking – What is a mask?

- **Inform the product of your naming conventions**
- **Convert a naming convention to another**
- **Allows you to specify how a source object “matches up” to a target object**
 - Owner differences: TESTDBA vs PRODDBA
 - Name differences: TESTPAYROLL vs PRODPAYROLL
- **Used in GEN, WSL Cloning, MIG and Object Comparison Tool**

Masking – Object specific masking

- Prior to this enhancement:
 - Masking applies to all objects matching the mask
 - TBNAME:ABC*,DEF*
 - All tables named ABC* would be masked to DEF*

- With this enhancement:
 - Masking can be applied only to a subset of objects
 - Only objects matching the specification will qualify:
 - TBNAME:QUALX.ABCTB1:ABC*,DEF*
 - > Table QUALX.ABCTB1 is masked to QUALX.DEFTB1
 - > Table QUALX.ABCTB2 would not be masked

 - Can use wild-cards as well
 - TBNAME:QUALX.ABCTB*:ABC*,DEF*
 - > Table QUALX.ABCTB2 would also be masked

Masking – Object specific masking

Mask type	Object-specific mask format
– ALNAME	ALNAME:schema_name.аланame:current_alname,new_colname
– ALSHEMA	ALSHEMA:alias_schema.alias_name:current_alschema,new_alschema
– COLNAME	COLNAME:schema_name.table_name:current_colname,new_colname
– CONSNAME	CONSNAME:tbschema.tbname:current_consname,new_consname
– DBOWNER	DBOWNER:database_name:current_downer,new_downer
– DBRMNAME	DBRMNAME:stpschema.stpname:current_dbrmname,new_dbrmname
– GRPNAME	GRPNAME:dbname:current_grpname,new_grpname
– IXBPNAME	IXBPNAME:ixschema_name.index_name:current_bpname,new_bpname
– IXNAME	IXNAME:ixschema_name,ixname:current_ixname,new_ixname
– IXOWNER	IXOWNER:ixschema_name.index_name:current_ixowner,new_ixowner
– IXSCHEMA	IXSCHEMA:index_schema.index_name:current_ixschema,new_ixschema
– IXSGNAME	IXSGNAME:ixschema.indexname:current_ixsgname,new_ixsgname
– LOCATION	LOCATION:schema_name.obj_name:current_location,new_location
– MKNAME	MKNAME:schema.maskname:current_maskname,new_maskname
– MKSCHEMA	MKSCHEMA:schema.maskname:current_schema,new_schema
– PGMNAME	PGMNAME:stpschema.stpname:current_pgmname,new_pgmname
– PKGNAME	PKGNAME:collection_id.pkgname:current_pkgname,new_pkgname
– PMNAME	PMNAME:schema.pmname:current_pmname,new_pmname
– PMSHEMA	PMSHEMA:schema.pmname:current_pmschema,new_pmschema

[More...](#)

Masking – Object specific masking

– SEQNAME	SEQNAME:seq_schema.seq_name:current_seqname,new_seqname
– SEQSHEMA	SEQSCHEMA:seq_schema.seq_name:current_seqschema,new_seqschema
– STPNAME	STPNAME:stp_schema.stp_name:current_stpname,new_stpname
– STPSHEMA	STPSCHEMA:stp_schema.stp_name:current_stpschema,new_stpschema
– SYNNAME	SYNNAME:synowner.synname:current_synname,new_synname
– SYNOWNER	SYNOWNER:synowner.synname:current_synowner,new_synowner
– TBNAME	TBNAME:tbschema_name.tbname:current_tbname,new_tbname
– TBOWNER	TBOWNER:tbschema_name.tb_name.current_towner,new_towner
– TBSHEMA	TBSHEMA:tb_schema.tb_name:current_tbschema,new_tbschema
– TGNAME	TGNAME:tgschema.tgname:current_tgname,new_tgname
– TGSCHEMA	TGSCHEMA:tgschema.tg_name:current_tgschema,new_tgschema
– TSBPNAME	TSBPNAME:db_name.ts_name:current_tspbname,new_tspbname
– TSNAME	TSNAME:db_name.tsname:current_tsname,new_tsname
– TSOWNER	TSOWNER:db_name.ts_name:current_tsowner,new_tsowner
– TSSGNAME	TSSGNAME:db_name.ts_name:current_tssgname,new_tssgname
– UDFNAME	UDFNAME:udfschema.udfname:current_udfname,new_udfname
– UDFSCHEMA	UDFSCHEMA:udf_schema.udfname:current_udfschema,new_udfschema
– UDTNAME	UDTNAME:udtschema.udtname:current_udtname,new_udtname
– UDTSCHEMA	UDTSCHEMA:udt_schema.udtname:current_udtschema,new_udtschema
– VCATNAME	VCATNAME:schema.obj_name:current_vcatname,new_vcatname
– VWNAME	VWNAME:vwschema.vwname:current_vwname,new_vwname
– VWSHEMA	VWSHEMA:vwschema.vwname:current_vwschema,new_vwschema
– WLMENV	WLMENV:udfschema.udfname:current_wlmenvname,new_wlmenvname

Agenda

- **DB2 Administration Tool V10.2**
 - Table Details
 - Package Details
 - Change Management

- **DB2 Object Comparison Tool V10.2**
 - Save Compare results
 - Ignoring changes
 - Excluding objects
 - Masking enhancements

- **Customize using Tools Customizer for z/OS**

TCz – Tools Customizer for z/OS

```
Session A - [43 x 80]
File Edit View Communication Actions Window Help
CMD TMZR          IBM Tools Customizer for z/OS          13:49:22
Option ==> 0_
Select an option.
Attention: Before you customize a product, verify your user settings.
0. User settings for Tools Customizer
1. Customize a product
X. Exit

*xCMD
MA a          02/015
```

- A common install tool for IM Tools
 - Post-SMPE tool
- Framework to simplify installing multiple products, across multiple subsystems
- → Maintain site values in one place
- → Build customized JCL

TCz – User settings (option 0)

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
CMD TMZR Tools Customizer Settings 13:57:04
Command ==>

Enter the settings for customizing a product or press End to save and exit.
Commands: SAVE - Save user settings

Product Customization Settings

Customization library qualifier . . J148286.ADBA20
Use DB2 group attach . . . . . YES (YES/NO)

Tools Customizer Library Settings

Metadata library . . . . . DB2TOOL.PTF110.SCCQDENU
Discover output data set . J148286.ADBA20.DISCOVER
Data store data set . . . J148286.ADBA20.DATASTOR

User Job Card Settings for Customization Jobs

==> // JOB
==> // USER=J148286,
==> // NOTIFY=J148286,
==> // MSGCLASS=H,
==> // MSGLEVEL=(1,1)

*xCMD
MA a 02/015

```

- Specify where to write the customized jobs
- Specify input data set for TCz metadata
- Specify output discover and data store data sets (holds your installation values)
- Specify job card settings

TCz – Product metadata library

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
CMD TMZR Specify the Metadata Library 13:55:09
Command ==> _____ Scroll ==> _____

Type the name of the metadata library for the pack or the product in the
Metadata library field, or select the library name in the list of previous
libraries and press Enter to populate the field. Press Enter to continue.

The default name of the metadata library after the pack or the product has been
SMP/E installed is <hlq>.SxxxDENU, where <hlq> is the high-level qualifier for
the pack or the product, and xxx is the three-character prefix for the pack or
the product.

Metadata library . ADB.VA2APAR.SADBDENU

Previously Used Metadata Library:

=>
=>
=>
=>
=>
=>
=>
=>
=>
=>
=>
=>
=>
=

CCQPDSP CMD Run Discover EXEC

You can run the Discover EXEC if you already have a customized
version of IBM DB2 Administration Tool for z/OS

If you are customizing the product for the first time, do not run the
Discover EXEC.

Press Enter to go to the Discover Customized Product Information panel,
or press End to cancel.

MA a 13/021

```

- Specify the input metadata library for the product being customized
- Discover helps to capture your existing installation values

TCz – Discover

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
GCQPDS C CMD Discover Customized Product Information 14:06:38
Command ==> run_ Scroll ==> PAGE

For the product you are customizing, the Discover EXEC retrieves product
information from an already customized product. Specify the required
information. To save your information and run the Discover EXEC, issue the RUN
command. To save your information and stay on this panel, issue the SAVE
command. To verify the syntax of your information without saving it, press
Enter. To save and exit, press End.

Commands: RUN SAVE

Product to Customize
Product metadata library : ADB.VA2APAR.SADBDENU > LPAR. . . : SY4A
Product name . . . . . : IBM DB2 Administration Too > Version : 10.2.0

Discover EXEC for Extracting Information from an Already Customized Product
Discover EXEC library . . . ADB.VA2APAR.SADBEXEC
Discover EXEC name . . . . : ADB2CUST
Discover output data set . . J148286.ADBA20.DISCOVER

Information for Discover EXEC
TCz operation type . . . . . D (D)
DB2 Administration Tool high level qualifier
ADB.VA2APAR >
DB2 Group Attach Name . . . . . NONE
Customized parameters table library . . . ADB.DEVCUST.ISPTLIB >
Debug . . . . . NO_ (NO,YES)

x CMD
MA a 02/018

```

- A product can discover information from an existing install
- Provide information and use “RUN” to discover the values

TCz – Associate a product and subsystems

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
GCQPWRK CMD Customizer Workplace Row 1 to 2 of 2
Command ==> Scroll ==> PAGE

Use the Generate jobs line command to select the DB2 entries on which to
customize the product, and press Enter to generate the customization jobs.

Commands: ASSOCIATE DISCOVER GENERATEALL JOBLIST

Product to Customize
Product metadata library : J148286.VA2APAR.SADBDENU > LPAR . . : SY4A
Product name . . . . . : IBM DB2 Administration Too > Version . : 10.2.0

Product and LPAR Parameter Status
Line commands: E - Edit B - Browse
e Product parameters . : Discovered
_ LPAR parameters . . : Ready to Customize

DB2 Entries, Associations, and Parameter Status
Line commands: G - Generate jobs E - Edit B - Browse C - Copy R - Remove
Cmd SSID GrpAtch Lvl Mode User ID Date Status
- DSN9 -- NFM J148286 2012/07/30 Incomplete
- DSNA -- NFM J148286 2012/07/30 Incomplete
----- End of DB2 entries -----

x CMD
MA a 15/006

```

- “Associate” ties together a product and its use on a DB2 subsystem
- TCz lists the status of the product and each DB2 associated with it
- Use Edit to provide values for each of product, LPAR and each DB2

TCz – Edit product parameters

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
GCQPPRD CMD Product Parameters 14:17:41
Command ==> _____ Scroll ==> PAGE

Complete the following tasks to customize the products. The required tasks and
steps are preselected. Ensure that all parameters are specified for each
selected step within a task. Press End to save and exit.

Commands: SAVE - Save parameter values
Line Commands: / - Select

Product to Customize
  Product metadata library : ADB.VA2APAR.SADBDENU > LPAR. . . : SY4A
  Product name . . . . . : IBM DB2 Administration Too > Version : 10.2.0

Product customization library : J148286.ADBA20.$SY4A$.ADB1020
More: +

IMPORTANT:
The values that you specify for parameters on the Product Parameters panel
apply to every DB2 SSID unless you specify values for parameters with the
same names on the DB2 Parameters panel. In this case, the values on the
DB2 Parameters panel override the values on the Product Parameters panel.

Required parameters
DB2 Admin customization high-level qualifier(s)
  ADBA20 Add...

Fixed to variable blocked VOLSER . . . . . _____
Fixed to variable blocked UNIT . . . . . _____
(Global) Checkpoint table owner . . . . . _____
(Global) Checkpoint database STOGRROUP . . . . . _____
(Global) Checkpoint database volumes . . . . . _____
(Global) Checkpoint database VCAT . . . . . _____
(Global) Checkpoint database name . . . . . _____
(Global) Checkpoint tablespaces mask . . . . . ADBSCH
(Global) Catalog copy version table owner . . . . . _____
  SYSADM _____ >
(Global) Catalog copy version table STOGRROUP . . . . . _____
  ADBGCC _____
(Global) Catalog copy version table volumes . . . . . _____
  "x" _____ >
(Global) Catalog copy version table VCAT . . . . . _____
  DB2 _____
(Global) Catalog copy version table database name . . . . . _____
*CMD
MA a 27/047

```

- Each parameter is described and has field-level help
- Initial values come from discover or product defaults

TCz – Ready to customize

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
GCQPWRK CMD Customizer Workplace Row 1 to 2 of 2
Command ==> generateall_ Scroll ==> PAGE

Use the Generate jobs line command to select the DB2 entries on which to
customize the product, and press Enter to generate the customization jobs.

Commands: ASSOCIATE DISCOVER GENERATEALL JOBLIST

Product to Customize
Product metadata library : J148286.VA2APAR.SADBDENU > LPAR . . : SY4A
Product name . . . . . : IBM DB2 Administration Too > Version . : 10.2.0

Product and LPAR Parameter Status
Line commands: E - Edit B - Browse
_ Product parameters . : Ready to Customize
_ LPAR parameters . . : Ready to Customize

DB2 Entries, Associations, and Parameter Status
Line commands: G - Generate jobs E - Edit B - Browse C - Copy R - Remove
Cmd SSID GrpAttch Lvl Mode User ID Date Status
-----
_ DSN9 -- 101 NFM J148286 2012/07/30 Ready to Customize
_ DSN9 -- 910 NFM J148286 2012/07/30 Ready to Customize
----- End of DB2 entries -----

*xCMD
MA a 02/038

```

- Everything is now “Ready to Customize” (all necessary values are known)
- Use GENERATEALL or Generate per DB2 to generate the batch jobs to customize for each subsystem

TCz – Customized jobs are built

```

Session A - [43 x 80]
File Edit View Communication Actions Window Help
CCQCST CMD          Finish Product Customization          Row 1 to 6 of 6
Command ==> _____ Scroll ==> PAGE

Submit the members in the order in which they apply to all DB2 entries. To
submit the job, browse the member and issue the TSO SUBMIT command, or browse
the customized library and submit the jobs from there.

Product to Customize
  Product metadata library : J148286.VA2APAR.SADBDENU   > LPAR . . . : SY4A
  Product name . . . . . : IBM DB2 Administration Too > Version . . : 10.2.0

Line Commands: E - Edit  B - Browse

_ Product customization library . : J148286.PTF110.$SY4A$.ADB1020 >

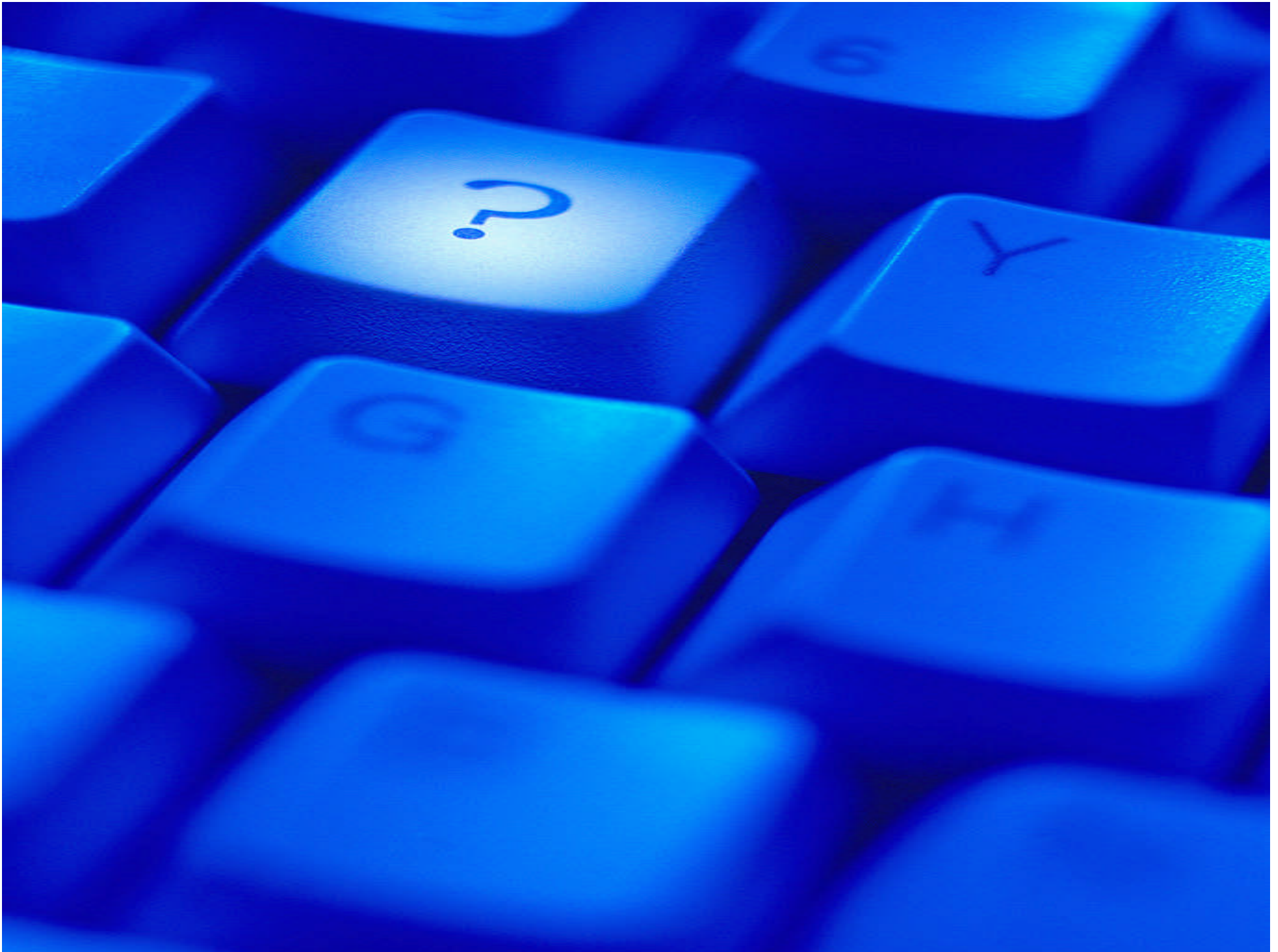
  Cmd Member  SSID GrpAtch Template Date      Description
  ---
  e  _ A0CUSTAP DSN9  --      ADBCUST 2012/07/30 General customization
  _  A0CUSTAW DSNA  --      ADBCUST 2012/07/30 General customization
  _  A2CHKPAP DSN9  --      ADBCHKPT 2012/07/30 Create DB2 checkpoint objects
  _  A2CHKPAW DSNA  --      ADBCHKPT 2012/07/30 Create DB2 checkpoint objects
  _  A6BINDAP DSN9  --      ADBBIND  2012/07/30 V10 NFM Binds
  _  A6BINDAW DSNA  --      ADBBIND  2012/07/30 V10 NFM Binds
  ----- End of customized jobs -----

CCQC000I The jobs were generated on the selected DB2 entries.

*xCMD
MA a 18/005

```

- Edit and submit in the sequence presented



Contact & References

- DB2 Administration Tool for z/OS
 - <http://www-01.ibm.com/software/data/db2imstools/db2tools/db2admin/>
- DB2 Object Comparison Tool for z/OS
 - <http://www-01.ibm.com/software/data/db2imstools/db2tools/db2-object-compare/>

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