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# *JRH DB2I2**

## For DB2™ zOS

## Quick Reference

### Version 12.0

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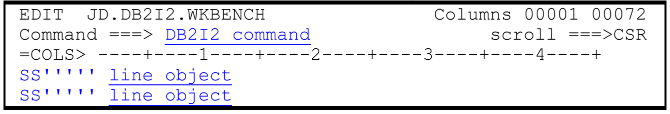
## How *JRH DB2I2* works

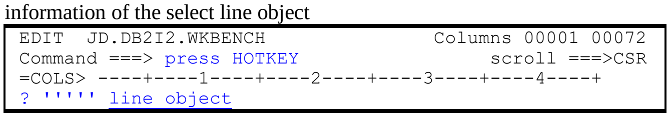
DB2I2 is a superset of ISPF edit command. It works just like all the other ISPF commands. To direct DB2I2 to perform a task, you do the following in sequence:

- Enter line object(s) on edit line
- Enter DB2I2 command on command line
- Select line object(s) and press HOTKEY (Use ISPF KEYS command to define one of the FKEY to DB2I2 as HOTKEY)



```
EDIT   JD.DB2I2.WKBENCH                      Columns 00001 00072
Command ===> DB2I2 command                           scroll ===>CSR
=COLS> ----+----1----+----2----+----3----+----4----+
SS''''' line object
SS''''' line object
```

- Use ? to select a line object and press HOTKEY to display HELP information of the select line object



```
EDIT   JD.DB2I2.WKBENCH                      Columns 00001 00072
Command ===> press HOTKEY                            scroll ===>CSR
=COLS> ----+----1----+----2----+----3----+----4----+
? ''''' line object
```

## JRH DB2I2 Line Object

### Line Object Definition

- Line object consists of two parts: line object abbreviation and line object detail separated by a blank.
- Line object can be entered any where on your edit line. However, no other information allowed to be entered before line object abbreviation.
- Line object detail can be a full name or a DB2 wild card name. For example: Q.PROFILES or Q.%.
- '—' on column 1 and 2 indicates the line is a comment line.
- '—' on any column within SQL block for DB2I2 RUN command indicates that all the information from '—' to the end of the line will be treated as comment.

### How to select line object

- Use command option **IDSN**='line.object.dsname' to read in the line objects from the 'line.obj.dsname' file.
- Use a new ISPF line command **S** to select single line object.
- Use a new ISPF block line command **SS** to select a block of line objects.
- If there are no S or SS line command entered, the current **cursor positioned** line object is selected.
- If none of the above, then the **first displayed line object** is selected.

### Line Objects Abbreviation and Description

| | | |
|---|---|---|
| **AC** | Active log line | |
| **AI** | ixcreator.ixname Partno row-count key-card | (Adjust Index part line) |
| **AL** | creator.name | (Alias) |
| **AR** | Archive log line | |
| **AT** | dbname.tsname partno tbcreator.tbname row-count %compressed | (Adjust Table space Part line) |
| **BP** | buffername | (Bufferpool) |
| **CI** | catalog table insert line | |
| **CL** | collid | (Collection) |
| **CO** | tbcreator.tbname.colname | (Column) |
| **CP** | check point line | (Check Point line) |
| **CU** | catalog table update line | |
| **DB** | dbname | (Database) |
| **DM** | planname.dbrm | (DBRM) |
| **DS** | datasetname | (db2 vsam dataset name) |
| **DT** | schema.name | (Distinct Type - V6 or above) |
| **FC** | [ssid[\loc].]dbname.tsname [ssid[\loc].]dbname.tsname | |
| **FU** | schema.name | (Function name – V6 or above) |
| **GV** | &var=value | (Global Variable line) |
| **IC** | tbcreator.tbname.indexcol | (Index Column) |
| **IP** | creator.name partno | (Index Part) |
| **IPC** | creator.name partno | (Index Part Clone) |
| **IS** | dbname.indexspace | (Index Space) |
| **ISC** | dbname.indexspace | (Index Space Clone) |
| **ISP** | dbname.indexspace ptno | (Index Space Part) |

| | | |
|---|---|---|
| **ISPC** | dbname.indexspace  ptno | (Index Space Part Clone) |
| **IX** | creator.name | (Index) |
| **IXC** | creator.name | (Index Clone) |
| **JA** | Jar-schema.Jar-Id | (JAR) |
| **JI** | jobname.jobnum | (Job Information) |
| **MS** | schema.name | (Column Mask) |
| **MT** | creator.name | (Material query Table) |
| **OI** | DBID[.obid\|.psid\|.isobid] | (Object Id) |
| **PG** | location.collid.name.verion | (Package) |
| **PGD** | .Scollid.Sname.sver Tloc.Tcollid.Tname.Tver | (Package Deploy) |
| **PL** | planname | (Plan) |
| **PM** | schema.name | (Row Permission) |
| **RI** | Parent_creator.Parent_tbname.Child_creator.Child_tbname | (Referential Integrity) |
| **RL** | Archive log RBA line | |
| **RO** | Role name | (Role Name) |
| **SC** | [ssid[\loc].]dbname.tsname [ssid[\loc].]dbname.tsname [part#] | |
| **SG** | stogroupname | (StoGroup) |
| **SH** | schema | (Schema name – V6 or above) |
| **SP** | schema.name | (Stored Procedure name – V6 or above) |
| **SQ** | schema.name | (SeQuence – V8 or above) |
| **SY** | creator.name | (Synonyms) |
| **TB** | creator.name | (Table) |
| **TBC** | creator.name | (Table Clone) |
| **TC** | trusted context name | (Trust Context) |
| **TP** | dbname.tsname  partno | (Table Partition) |
| **TPC** | dbname.tsname  partno | (Table Partition Clone) |
| **TR** | schema.name | (Trigger name – V6 or above) |
| **TS** | dbname.tsname | (Tablespace) |
| **TSC** | dbname.tsname | (Tablespace Clone) |
| **US** | username | (User) |
| **VA** | schema.name | (Variable) |
| **VL** | volume | (Volume) |
| **VW** | creator.name | (View) |
| **XC** | [ssid[\loc].]ixcreator.ixname [ssid[\loc].]ixcreator.ixname [part#] | |

## Global line object options

**<NEWJOB>** enter <NEWJOB> token anywhere on the line object to signal the beginning of a new job for utility generation.
**%=###** specify %=### Percentage adjustment from the current allocation on the edit line after the line object to override the size adjustment.
**ALLOC=(alloc_type,primary,secondary)** specify space allocation for DB2I2 command result. Specify alloc_type: CYL-for cylinder, TRK-for track, and PAGE for page. Specify primary and secondary for primary and secondary allocation, They must be both numeric. Specify this option on the edit line after the line object to override the space allocation.

# DB2I2 Command

## SYNTAX: db2i2-command [command options]

## Global command options

These command options can be used with most of the DB2I2 command.

**%=###** **###** % adjustment from the current space allocation.  Use sub-parameter CYL or TRK to roundup to cylinder or track boundary
**APPEND** output append to the existing sequential file
**DFLTSP=(pri,sec)** Override default space allocation for object with no RUNSTATS information for CHECk, DSCOPY, REBUILD, RECOVER and REORG command. The default if not specify is DFLTSP=(1,1)
**DSPRE=**DatasetPrefix instruct DB2I2 to use the DatasetPrefix as the prefix for the generated DB2 utility JCL work file name.
**ERROR(CONTINUE|SKIP #)** continue process next DB2I2 command or skip # commands in batch mode if there is an error during the current command process.
**IDD='line-object.input.ddname'** direct DB2I2 to read the specified file ddname in batch mode process as the line object input source.
**IDSN='line-object.input.dsname'** direct DB2I2 to read the specified file as the line object input source. Specify IDSN=*memname let you use the input from DB2I2 system library. For example, IDSN=*GENAT allows you reuse the query deliver with DB2I2 to generate AT line objects.
**JOB#=##** specify the start job number for generated JCL with ## option when using it with JOBCARD.
**JOBNM=jobnm##** specify JOB name override with  ## substitute option. This option can also used with ODSN=odsn(*) option to decide the output PDS member name.
**JOBCARD=N** directs DB2I2 to disable the generation of JOBCARD for BATCH or any utility generation commands.
***MACRO(your.ed.macro)***  *Use this option to customize your output JCL generated from QUIESCE, RECOVER, REBUILD, COPY, REORG, LOAD, REPAIR, MODIFY, CHECk, REPORT, RUNSTATS, DSN1COPY, DSN1PRNT DSADJ and DSCOPY. (for Db2 V7 or above only)*
**NEWJOB=###**  for any job generation. Use this option to signal a new job for ### of job steps.
**NOTFOUND (CONTINUE|SKIP # )**  skip # command lines from the current DB2I2 Command or continue process next command when you have RECORD NOT FOUND in Batch mode for the following commands: AL, TB, VW, SY, TS, IX, PL, PG, RI, BIND, REBIND, PACKIT, FREE, SELECT, INSERT, UPDATE, DELETE, DCLGEN, SELPATHU, RUN
**ODD='output.ddname'** direct DB2I2 to store output into the specified DDNAME. This option works with most db2i2 command except command generates JCL such as REORG, COPY…
**ODSN='output.dsname'** direct DB2I2 to store output into the specified file.
**ODSN='output.dsname(*)'** direct DB2I2 to store output into the specified PDS file where the member name is determined by the either the job name from job card or by JOBNM command option. This option can be used with all DB2I2 utility command such as COPY, REORG, RECOVER, REBUILD, LOAD and UNLOAD.
**SKIP=(#1,#2) or SKIP(#1)** skip #1 command lines from the current DB2I2 Command line #2 times in batch mode. The current command must be processed successfully before skip will happen.
0 is the default value for #1, which means no Command lines are skipped. Specify -1 repeat the current command. Specify -2 to process previous command. If #1 is greater than end of the command line, Job will end after current command**.**
**#2** is the number of time to skip. The default is unlimited.
**SQLID=sqlid** generate SET CURRENT SQLID to specified sqlid before any of applicable generated script output. For example, MIGR or GRANT commands.
**STEP#=##** assign step number for the DB2I2 generated output JCL. The step number generated will be ### + 1
**T=N** instruct DB2I2 not to print any of the title or heading/footing information for the output
**WKSP=#** instruct DB2I2 to override the default output file allocation from Track,1,1 to Track,,#,1
**WKSP=(type,pri,sec,dir)** instruct DB2I2 to override the default output file allocation from Track (1,1 2) to Track,(pri,sec,dir). Where pri, sec and dir is specified should all be defined as numeric Number.

## Comment and continuation for batch command

**'—'** on column 1 and 2 indicates the command line is  a comment line in the batch process.

**'+'** on the last position of a DB2I2 command line indicates the command will be continue on to the next command line.

## Global Variable and Host Variable

### Global Variable

- Defined with SETG command
- Used with any DB2I2 command when command options is too long
- Can contain host variables
- Never define a name which match the first part of the other name. Example,
  &EXPLAIN and &EXPLAIP are OK but
  &EXPLAIN and &EXPLAINP are NOT OK since EXPLAIN will never be used.

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- Setup system default Global Variable in the system clist library DB2I2.CLIST(GLOBVAR)
- Define your own default global variable in 'tsoid.db2i2.global.variable'
- Both system default and your own default global variables are loaded automatically when login to DB2I2. Do not use the same global variable name as the one in System default, otherwise, the system default override you own default.

## Host Variable

- Used with BATCH ICMD and RUN command to substitute host variables in predefined set of DB2I2 command or SQL.

**When use Global Variable with Host Variables, the host variable name must not be the same as global variable name. To avoid conflict name used, uses &_nnnn to create a uniqueness of a host variable.**

## DB2I2 Command Detail

**B-Batch O-Online BO-Batch and Online**
**MO-Multiple line Object support**
**MT-Multiple line object Type support**
**WC-Wild Card % support**

________Drill down from the selected line object. When you position you cursor on a non-blank dataset name and select the line with default (no S specified), it also allows you to Edit or Browse the positioned dataset.
Syntax: [HOSTVAR can be used for PG or DM line object only to display host variable information] [NOSTATS used with PG or DM to disable display of statistics information – the output can be used with EXPALIN directly] [TRUNC=Y truncate the result if the result line length is > lrecl]
Line objects allowed: DB, TS, TB, CO,AL, SY, VW, IX, PG, PL, SG, DM, TP, IP,DS, RI,
(DT, TR, SP, FU, SH for V6 or above)
(IS, ISP, MT, OI, SQ for v8 or above)
TSC,TPC,TBC,IXC,IPC,ISC,ISPC,TC,RO (V9 or above)
(PM, MS for V10 or above)
VA (for V11+)
Append stmt# to PG or DM line object to display only the Specified stmt# from the selected PG or DM
**BO-MO-MT-WC**

**AL** Generate Alias line objects from the selected line object.
Syntax: AL
Line objects allowed: TB, VW, PG, PL, MT, TBC
**BO-MO-MT-WC**

**ALTER** Generate ALTER DDL for the selected line object or ALTER UTILITY command for a display utility line.
Syntax: ALTER
Line objects allowed: DB, TS, TB, IX, SG
(SP, FU for V6 or above)
A display utility line with UTILID = utilid
(SQ, CO for V8 or above)
(PM, MS for V10 or above)
**O-MO-MT**

**AUTH** Display Authorization information for the selected line objects.
Syntax: AUTH [GRANTOR|GRANTEE]
Line objects allowed: AL, BP, CL, DB, PG, PL, SG, TS, TB, US, VW
(DT, SH, FU, SP, TR for V6 or above)
(SQ, MT for V8 or above)
(RO,TBC for V9 or above)
(VA for V11+)
**BO-MO-MT-WC**

**BATCH** Generate BATCH JCL to run DB2I2 commands. Majority of the DB2I2 command can be executed through batch mode, so that you can free your terminal for the long running command, or schedule it to run during the preferred time. Use ICMD option to process DB2I2 command or prepared JCL from external file. You can specify Host variable in Upper case substitution &var= with ICMD option. Use &var=H-xxx-H for format of host variable to avoid conflict with command option or other pre-defined global variables. Specify ICMD=*memname to retrieve predefined commands from DB2I2 system library. Specify JCL=N option to disable the jobcard generation for prepared JCL.
For example, ICMD=*TUNEPG generate commands to tune a db2 package.
By default, DB2I2 process one command for all selected line objects. By using the CLI option, you have flexibility to process files before and after a call to DB2I2. Uses CLI=MC command option to process multiple DB2I2 commands against each line object one at a time. Uses CLI=UTIL command option to generate DB2 utility one line object at a time with option to automatically submit it. Uses CLI=clidsn(mem) option to process your own REXX or CLIST CLI interface. If you use this option, the clidsn should be Fixed 255 bytes long.
Use IDSN= and ODSN= to direct the input and output file name for the BATCH command. When you specify ODSN= option, DB2I2 generates JCL and stores them in the ODSN specified.
Use ODSN*= if you want to assign the output file name to be used for generated db2i2-command. Specify WKSP*=(type,pri,sec,dir) option to specify the space allocation for ODSN*.
When line object is greater than 80 bytes long, save the line objects in a file and use IDSN=*DUMMY and IDSN*=line.object.filename to assign line object input file, By doing so, DB2I2 will not expand the input line objects.
Use JOBDD=N to generate no //JOBDD CARD information.
Please refer to MCCLI and UTILCLI two sample CLI routine in the LIB dataset.
SSID DD contains the following:
SSID\Connection-Location db2-version SYSIBM [Restatr no]
DB2I2CMD DD contains all the DB2I2 command lines. You can enter a '+' to continue a DB2I2 command line if it is too long.
LINEOBJ DD contains the default selected line object lines.
Syntax: BATCH db2i2-command command-option or
BATCH ICMD=db2i2-command.input.dataset or
BATCH ICMD=prepared-jcl-file [JCL=N]
BO-MO-MT

**BIND** Generate DB2 BIND command for the selected package or plan. CL=USER assigns your TSOID as collection. O=USER assings your TSOID as owner.
Syntax BIND [CL=collection] [O=owner] [Q=qualifier] [MEM=*] [GRANT=Y] [EXPLAIN=Y]
Line objects allowed: PG, PL
**BO-MO-MT-WC**

**BIND COPY** Generate DB2 BIND COPY commands against selected package. CL=USER assigns your TSOID as collection. O=USER assings your TSOID as owner
Syntax: BIND COPY [CL=collection] [O=owner] [Q=qualifier] [GRANT=Y]
[EXPLAIN=Y]
[OPTIONS(COMPOSITE¦COMMAND) v7 or above]
Line objects allowed: PG
**BO-MO-MT-WC**

**BIND DEPLOY** Generate DB2 BIND DEPLOY commands against selected package.
Syntax: BIND DEPLOY
Line objects allowed: PGD
**BO-MO-MT-WC**

**CANCEL [DDF] THREAD** Issue CANCEL THREAD or CANCEL DDF THREAD for a display thread line with Numeric Token as the last field on the line.
Syntax: CANCEL THREAD
CANCEL DDF THREAD [DUMP] [NOBACKOUT]
Line objects allowed: A display thread line with Numeric Token as the last field
**O**

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**CHECK** Generate DB2 CHECK DATA or CHECK INDEX utility JCL for selected table space or index.
Syntax: CHECK [[PARMUTIL=]'parmutil.dsn'] [DFLTSP=(1,1|pri,sec)]
[FNM=ID] [WKUNIT=TAPE,0|#]
[LISTDEF=listdef.dsname[(patt*)]] [TEMPLATE=template.dsname]
[OPTIONS=options.dsname] v7 or above
Line objects allowed: TS, IX, TP, IP
TSC, TPC, IXC, IPC, ISC, ISPC (v9 or above)
**BO-MO**

**COAUTH** Display Column Authorization information for the selected line objects.
Syntax: COAUTH [GRANTOR|GRANTEE]
Line objects allowed: AL, TB, US, VW, MT, RO
**BO-MO-MT-WC**

**CONNECT(location)** and **CONNECT(RESET)** connect to remote location or reset connection. Issue CONNECT(?) to display all location information
Syntax: CONNECT(location name)
CONNECT(RESET)
**BO**

**COPY** Generate DB2 IMAGE COPY or MERGCOPY utility JCL for selected table space. If 'copy.parm.dsname' is specified, the copy option will be generated based on the 'copy.parm.dsname'.
Syntax: COPY [[PARMUTIL=]'parmutil.dsn']
[LISTDEF=listdef.dsname[(patt*)]] [TEMPLATE=template.dsname]
[OPTIONS=options.dsname] v7 or above
Line objects allowed: TS, TP
IX, IP for db2 v6 or above
IS, ISP for v8 or above
TSC, TPC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO-MT**

**COPYAUTH** Generate GRANT DCL for specified DB2 user. This command is useful to copy all the authorizations from one DB2 user to another. Use CRE DB CL SG and SH options to assign new values for creator, dbname, collid, stogroup, and schema.
Syntax: COPYAUTH [GRANTOR|GRANTEE] [TO=to-userid]
[CRE=new_creator] [DB=new_dbname] [CL=new_collid]
[SG=new_stogroup] [SH=new_schema]

Line objects allowed: US,RO
AL,BP,CL,DB,DT,FU,MT,PG,PL,SG,SP,SQ,TB,TS,VW
**BO-MO-WC**

**CPY2CPY** In V7 or above, generates COPYTOCOPY utility JCL to make copy of image copy offline. If FROMCOPY option is selected, use ICGEN=# at end of the line object to specify generation of full image copy to be used as input to CPY2CPY. # if specified must be <= 0, 0 means the most current image copy is used. You can also use ICDATE=YYMMDD at end of the line object to specify the full image copy from specific date is used as input to the CPY2CPY. TEMPLATE command option is required for CPY2CPY command.
Syntax: CPY2CPY TEMPLATE=cpy2cpy.template.dsname
[LISTDEF=listdef.dsname[(patt*)]] [OPTIONS=options.dsname]
[[PARMUTIL=]'parmutil.dsn']
Line objects allowed: TS, TP, IX, IP
IS, ISP for v8 or above
TSC, TPC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO-MT**

**CREATE** Generate CRAETE DDL for the selected line object.
Syntax: CREATE
Line objects allowed: AL, DB, DT, FU, IX, SG, SP, SY, TB, TR, TS, VW
MT, SQ for v8 or above
RO, TC (V9 or above)
MS, PM for V10 or above
VA for V11+
**BO-MO-MT**

**CURSORD** Generate DECLARE CURSOR embedded SQL statement for the selected line object.
Syntax: CURSORD
Line objects allowed: TB, AL, SY, VW, MT, TBC
**BO-MO-MT**

**DB** Generate DD line object from the selected line object.
Syntax: DB
Line objects allowed: TS, TP, IX, IP, IS, ISP, TB, MT
TSC, TPC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO-MT-WC**

**DBAUTH** Display Database Authorization information for the selected line objects.
Syntax: DBAUTH [GRANTOR|GRANTEE]
Line objects allowed: DB, US, RO
**BO-MO-MT-WC**

**DBDSIZE** Display Database DBD size and issues warning for any Database size grater than threshold,. Default is 300000 bytes.
Syntax: DBDSIZE [threshold]
Line objects allowed: DB
**BO-MO**

**DB2CMD** Issue DB2 Command using the line objects specified. Use LIST option to list all available DB2 commands.
Syntax: DB2CMD [LIST]
Line objects allowed: DB2 command lines
**BO**

**DCLGEN** Generate DB2 DCLGEN commands for the selected Table, Alias or View.
Syntax: DCLGEN [[PARMUTIL=]'parmutil.dsn']
Line objects allowed: TB, AL,VW, SY, MT
TBC for V9 or above
**BO-MO-MT-WC**

**DDL** Generate DDL for the selected line objects. Specify %=### option to change space allocation based on ###% of current allocation. ALLOC option overrides the space allocation. Specify SQLTERM to generate DDL with ? instead of ; as the SQL terminator. TR=N is the default, which will not generate Trigger information for a TB line. Use MAXASGN option to generate DDL with Identity column START WITH maxassignval + increment. Use OBID option to generate OBID option for CREATE TABLE DDL.
Syntax: DDL [%=### [CYL|TRK|_] ] [ALLOC=(alloc_type,pri,sec)]
[SQLTERM(?) for V6 or above to specify sql terminator] [OBID]
[TR=N|Y] [MASASGN]
[CRE=new_creator] [DB=new_dbname] [CL=new_collid]
[SG=new_stogroup] [VCAT=new_vcatname] [O=new_owner]
[Q=new_qualifier] [SH=new_schema]
Line objects allowed: AL, DB, TS, TB, IX, SY, VW, SG, RI
(DT, SP, FU, TR for V6 or above)
(SQ, MT for v8 or above)
(TBC,TC for V9 and above)
(PM, MS for V10 and above)
(VA for V11+)
**BO-MO-MT**

**DELETE** Generate SQL DELETE statements for the selected table, alias, synonyms or view.
Syntax: DELETE [MAP='dclgen dsn']
Line objects allowed: TB, AL, SY, VW, MT, TBC
**BO-MO-MT**

**DEPEND** Display Dependency information from select line objects. Use OPTION to specify Parent, Child or Both dependencies. Default if not specified is B for both.
Syntax: DEPEND [OPTION=B|P|C]
Line objects allowed: CO, TR, FU, TB, IX, MT, SP, SQ, TS, SY, DT, VW, AL,
PT, MS, VA (V11 or above)
**BO-MO-MT**

**DISPLAY** Issue any valid DB2 -DISPLAY command option w/o line object or any -DSIPLAY options except DB and SP with DB,TS,TP,IX,IP. Use EDIT=Y option to edit the DISPLAY result.
Ex. DISPLAY DB(MYDB) RESTRICT LIMIT(*) EDIT=Y TSIX
Syntax: DISPLAY [DB2 display command option except DB and SPACE option]
[TSIX option to return TP or IP line objects] [EDIT=Y]
Line objects allowed: DB, TS, IX, TP, IP, IS, ISP, BP or no line object
**BO-MO-MT**

**DSADJ** Generates JCL to adjust the space allocation for the selected line objects. Use %=#### option to adjust the space ### % from the current allocation. MOVE=YES option generates DSN1COPY step to adjust the VSAM linear dataset.
Specify ALLOC option to override the space allocation:

Alloc_type can be CYL, TRK, PAGE; if omits alloc_type, DB2I2 uses device type information from ICF catalog as default.
Pri can be HIARBA, HIURBA or a numeric number. If omits pri, DB2I2 use primary allocation information from ICF catalog as default.
Sec should be a numeric number. If omits sec, DB2I2 use secondary allocation information from ICF catalog as default.

Specify MAXSZ option to set the max size allocation. If the calculated primary size is over the pri specified in the MAXSZ, the space allocation will be adjusted based on the values specified in the MAXSZ. Use OVRD option to specify REORG OVERRIDE table. DB2I2 create an INSERT SQL to insert the TP or IP line into the REORG OVERRIDE table.
Use ONESTEP=Y option to generate all DB2 ALTER in one job step.
Syntax: DSADJ [%=### [CYL|TRK|_] ] [MOVE=YES|NO]
[ALLOC=(alloc_type,pri,sec)] [MAXSZ=(type,pri,sec)]
[OVRD=reorg_override_table] [MACRO(your.ed.macro)]
[ONESTEP=Y]
Line objects allowed: TP, IP, ISP
TPC, IPC, ISPC (V9 or above)
**BO-MO-MT**

**DSCOPY** Generates DSN1COPY utility JCL to copy Tablespace or Indexspace with OBID translation extracted. ICOPY options allows imagecopy be used Y-Local Primary, LB-Local Backup, RP-Remote Primary, RB-Remote Backup, N-No imagecopy (vsam to vsam). Recover Index is also generated unless you specify line object option RCVRIX=N or RBLDIX=N to skip the recover index step generation. If ICOPY=Y,LB,RP,RB command option is selected, you can use line object option ICGEN=# to specify generation of full image copy to be used as input to DSCOPY. # if specified must be <= 0, 0 means the most current image copy is used. You can also use ICDATE=YYMMDD to specify the full image copy from specific date is used as input to the DSCOPY. When ICOPY=N is specified, use NOSTOPS to skip STOP TS for source TS. Use NOSTOP to generate no STOP and START db2 command for both source and target objects. When rebuild index step is generated, use SORTKEYS to generate SORTKEYS option for Rebuild Index step. When process Multiple line objects, use CONT=Y option to continue process the rest of the SC or XC line object if there are any difference between source and destination object. Use ERRDSN option to store error SC and XC lines. Use HLQ to specify High-level-qualifier for the selected Image Copy Dataset. Use DFLTSP option to assign default workfile space allocation in cylinder if no RUNSTATS information collected. Default if not specified is DFLTSP=(1,1) cylinder.
Syntax: DSCOPY [ICOPY=Y|N|LB|RP|RB] [NOSTOPS]
[NOSTOP][SORTKEYS][ HLQ=Copy-high-level-qualifier]
[MACRO(your.ed.macro)] [CONT=Y [ERRDSN=error.dsn]]
[DFLTSP=(1,1|pri,sec)] [CLONE=Y]
Line objects allowed: SC,XC
**BO-MO-MT**

**DSNJU004** Interface to DSNJU004 print log map interactively. Use BSDS= option to read the BSDS information directly from specified file. This is useful if DB2 subsystem is not up and running.
Syntax: DSNJU004 [BSDS=bsds.dsname]
Line objects allowed:
**BO**

**DSNTEP2** Interface to DSNTEP2 interactively.
Syntax: DSNTEP2 [SQLTERM(?) for v6 or above only]
Line objects allowed: SQL blocks
**BO-MO**

**DSNTIAD** Interface to DSNTIAD interactively.
Syntax: DSNTIAD [RC0] [SQLTERM(?) for v6 or above only]
Line objects allowed: SQL blocks
**BO-MO**

**DSNTIAUL** Generate DSNTIAUL utility JCL for the selected table, view, alias or SQL blocks (Use SQL option). SYSREC output can either go to disk as default (DEV=D) or send to tape with DEV=T option. Add SYSREC= and SYSPUNCH= at end of the line object to assign the SYSPUNCH and SYSREC output dataset name.
Syntax: DSNTIAUL [DEV=D|T] [SQL] [DSPRE=DatasetPrefix]
Line objects allowed: TB,VW, AL, SY, MT, SQL blocks or
TB creator.name [SYSREC=sysrec.dsn] [SYSPUNCH=syspunch.dsn]
TBC for V9 or above
**BO-MO-MT**

**DSN1COPY** Generates DSN1COPY utility JCL for the selected line objects.
Syntax: DSN1COPY
Line objects allowed: TS, IX, TP, IP, IS, ISP
TSC, IXC, TPC, IPC, ISC, ISPC for V9 or above
**O-MO-MT**

**DSN1LOGP** Generates DSN1LOGP utility JCL for the selected line objects. .
Use BSDS= option to read the BSDS information directly from specified file. This is useful if DB2 subsystem is not up and running. Use BSDS, ACTV or ARCH to specify the option for log print either from an active log, archive log or from RBA range by BSDS information.
Syntax: DSN1LOGP [BSDS='bsds.dsname'] [BSDS|ACTV|ARCH]
Line objects allowed: TS, IX, TP, IP, IS, ISP
TSC,IXC, TPC, IPC, ISC, ISPC for V9 or above
**O**

**DSN1PRNT** Generate DSN1PRNT utility JCL for the selected line objects.
Syntax: DSN1PRNT
Line objects allowed: TS, IX, TP, IP, IS, ISP
TSC, IXC, TPC, IPC, ISC, ISPC for V9 or above
**O-MO-MT**

**DT** Generates DT- distinct type from a selected line object.
Syntax: DT (V6 or above only)
Line objects allowed: TB
TBC for V9 or above
**BO-MO-WC**

**ED** Edit a sequential dataset, a group of sequential datasets, or a group of members of a PDS. Use MACRO option to process a predefined ISPF edit commands. Specify MACRO(*sysmacro) to process system defined macro. For example, use MACRO(*MYMENU) to access MYMENU system defined ED macro. When edit a group of pds members, Use START=starting-member-name END=ending-member-name to narrow down the range of editing.
Besides the regular ISPF edit commands, the following are a list of new edit commands, which can be used with ED:

**LOAD cache-name IDD=ddname | IDSN=dsname**
LOAD to load a cache-name from the content of a file
**INSERTB**
**INSERTA line#|* character string to be inserted**
**INSERT**
**INSERTB**
**INSERTA line#|* IDD=ddname | IDSN=dsname**
**INSERT**
**INSERTB**
**INSERTA line#|* CACHE=cache-name**
**INSERT**
INSERT, INSERTB, and INSERTA are used to insert a line, a file, or a loaded cache from previous LOAD ED command
All INSERT command can be substitute with REXX variables by specifying {REXX-VAR} in the inserted line or file. Line# can also be {REXX-VAR}.
Ex. INSERTA {linpos} IDSN={indsn}
Use {{ and }} are substituted with { and }.
IDSN can also be a {rexx-var}.

**DELETE line#|* [# of lines to be deleted|1|*]**
DELETE is used to delete lines. Use * to delete all lines from current Line position. Both line# and num of lines can be {REXX-VAR}.

**LOOP [#|EOF]** and LOOP_END
Use LOOP and LOOP_END to process a group of edit command repeatedly until # times reached or EOLOOP = 'Y'
You can set EOLOOP with a REXX command or a FIND command when NOFOUND condition raised. If you did not specify #, you need to specify a FIND command before LOOP and before LOOP_END
Use LOOP EOF to process until end of file is reached (with CLINE NEXT command). You needed to specify CLINE NEXT as last statement before the LOOP_END to check and see if the EOF is reached.

**GETG rexx-variable=&GV**
GETG is used to set a rexx variable to a global variable. The global variable must be set in previous steps. The set rexx-variable can then be used to substitute a {rexx-var} in the subsequent INSERT from a skeleton file.

**SETG 'string-before' &GV ' string-after'**
SETG is used to assign DB2I2 global variable from the current edit line with specified string pattern.

**SETG2 &GV=rexx-variable**
SETG2 is used to assign DB2I2 global variable from the current edit line with the content of a rexx-variable.

**CLINE [NEXT] [PREV] [WRITE]**
Use CLINE to set rexx variable CLINE with the current edit line information. Use CLINE NEXT to set CLINE to the next line and CLINE PREV to set CLINE to the previous line, EOF is set to 'Y' if end of file condition reached. Use CLINE WRITE to update the content of the current line with the content of REXX variable CLINE

**CPOS [#]**
Use CPOS to set rexx variable CPOS to the current line number or #. If # is used, the current line position also set to #.

**TOP or BOTTOM**
Use TOP or BOTTOM to position cursor to the first or last line of the edited file.

**REXX one line rexx statement (continuation with + at end)**
You can use REXX to parse edit line, process output, set EOLOOP and set variable to be used by INSERT. You should use ED_varname as the variable name in your REXX statement.
Special REXX variable LP contains the loop counter and EOLOOP for Looping control variable. Use REXX statement to set EOLOOP = 'Y' to end the LOOP process. REXX variable WSDSN contains the name of the current edit dataset. REXX variable ERROROFF = 'Y' to disable the error/warning message display for MYMENU process.
REXX variable NEXTLINE can be set to the next line to be executed.
Set EOF = 'Y' to set the end of file condition. You can check LAST_RC for the last command return code and skip the rest of the commands SIGNAL FINISH by issuing the following REXX command:

```
REXX IF LAST_RC \= 0 THEN SIGNAL FINISH.
```

Or skip commands SKIP # by issuing the following command:

```
REXX IF LAST_RC \= 0 THEN SKIP 5
```

**DB2I2 db2i2 statement (continuation with + at end)**
You can use DB2I2 to invoke DB2I2 command inside ED macro.

The Following ISPF edit macros can be used together with ED or Used as a **standalone ISPF command**. When they are used as ISPF edit command, they can only be processed in online mode, and you should use ENTER key to process them.

**DISTINCT start-col,end-col**
DISTINCT is added to drop duplicates.

**NEWJOB start-col,end-col**
Add <NEWJOB> token to line object if the data between start-col and end-col change.

**POSTMIGR [;,dlm]**
POSTMIGR are used to comment out the multiple occurrence of VIEW, ALIAS, SYNONYMS, BIND and GRANT and only leave the last occurrence as valid CRAETE, BIND or GRANT command from the output of MIGR command.
**FGET 'filename.tobe.inserted'|*xxxxxxxx**
**[TYPE=B|A POS=*|line#]** (required in batch mode)
**[&hostvar=hostvar-value]**
FGET can be used to get information from external file or *xxxxxxxx a DB2I2 delivered file directly into your existing edit session. Use B or A command to specify where you want the selected file to be inserted. Use &hostvar=hostvar-value to substitute host variables.
**FPUT 'file.tobe.created' [POS=#|*|*+#|*-# NOREC=# APPEND]**
Use FPUT together with CC or MM line command in online mode to copy or move a block of lines to an external file.
**RESIZEIT start-col,end-co,size|#JOB=## [TP2TS]**
[LISTNM=listnm ## [LIST#=##]]
RESIZE is added to resize the line object with the <NEWJOB> token based on the accumulated size between start-col and end-col and the size info. The size can be a numeric number or #JOB=## to let DB2I2 to calculate the size based on the number of jobs. Use TP2TS option to resize it on TS level instead of TP level. Use LISTNM and LIST# to append LISTNM=listnm## to the end of each line. ## if not specify default to 0.
**MODEBTCH**
When using Rxdb2i2 in online mode, use MODEBTCH to switch to simulated Batch mode, so that a series of commands can be run like in batch mode. (No stop between each command)
**MODERSTR**
Return back to online mode. You must issue MODERSTR after you are done with MODEBTCH, otherwise, Db2i2 will not behave correctly.

Use * in the dataset name or member name field to allow editing a group of dataset or members of a PDS. Use PASS=Y option to pass the content of IDSN, IDD or S Selected line down to your ED macro. The total number of line objects is stored in a rexx variable LNOBJ.0 and the actual content of the line objects are stored in a rexx array LNOBJ.. Use PASS=M option to pass the content of S selected line or input from LINEOBJ DD for batch as ED macros.
For example, 'MY.*.SYPUNCH' or 'MY.*' or 'MY.JCL(TST*)' OK
'MY.ABC*.*' or 'MY.ABC*' is NOT OK
Syntax: ED 'your.eding.dataset[(*|,mem*|memname)]'
[START=starting-mem-name] [END=ending-mem-name]
[MACRO(your.ed.macro)] [PASS=N|Y||M]
**BO**

**EDIT and END_EDIT** Use EDIT and END_EDIT pair commands in batch mode to allow ISPF edit commands be executed against a selected dataset. This command is obsolete, you should use ED command instead.
Two new addin ISPF Edit command: **DISTINCT start-col,end-col** is added to drop duplicates. **RESIZEIT start-col,end-co,size** is added to resize the line object with the <NEWJOB> token based on the accumulated size between start-col and end-col and the size info.
**(This command is obsolete and replaced by ED command)**
Syntax: EDIT 'edit.dsname'
ISPF Edit commands
END_EDIT
Line objects allowed: none
**B**

**EXEC** Execute DB2 Commands, IDCAMS commands, DDL, DCL or any of the DB2I2 scripts generated from various DB2I2 commands such as MIGR or DDL. [#] is the batch restart line number. Specify RC0 to continue process SQL scripts even if there are errors during process. Specify SQLTERM option in V6 or above to assign SQL terminator. Specify '+' at end of a DDL line to indicate the next DDL line is the continuation of current DDL line.
Syntax : EXEC [#] [ERROR(CONTINUE|SKIP #)] [RC0]
[SQLTERM(?) V6 or above only]
Line objects allowed: DB2I2 scripts
**BO-MO-MT**

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**EXPLAIN** Invokes DB2 EXPLAIN and display EXPLAIN output report. Query block number 0 is used as default explain output.
Use [QNO=#] option to direct DB2I2 to use QNO=# as the result starting QUERYNO. Use O=planowner option to SET SQLID for unqualified name from DBRM statement (This option is only allowed if you have authorization to issue SET SQLID command). Use DESC=N to disable printing of report detail description. Use DET=Y to enable catalog statistics drill down. DET=O is the default which display detail statistics only if the selected SQL is a potential problem SQL. Use DET=S to display SQL statement only without statistics. Use DEGREE=degree to assign CURRENT DEGREE. Use SQLTERM(?) to assign SQL terminator to allow multiple SQL to be explained. Don't specify SQLTERM option if default SQL terminator **;** is used.
Use SU= option to display only for those queries with service unit greater than or equal to the thread hold specified.
Specify EDIT=Y to Edit the output instead of Browse.
Syntax: EXPLAIN [QNO=#|0] [O=planowner] [DESC=Y|N] [DET=O|N|Y]
[DEGREE=degree] [SQLTERM(?)] [Q=qualifier]
[SU=service-unit-thread hold] [EDIT=Y] [T=N]
Line objects allowed: SQL statements block or
SQL statements block drilldown directly from PG or DM
**BO-MO**

**EXPLAINP** Display report from existing PLAN_TABLE.. Use PG=progname to select program, PL=planname to select plan. You can use wildcard % on both progname and planname field. Use QNO=# to display only for qnery no=#. Use QNO=#1-#2 to display query no between #1 and #2. Use DET=Y to enable catalog statistics drill down as well as db2 statistics. DET=O is the default which display detail statistics only if the selected SQL is a potential problem SQL. Use DESC=N to disable printing of report detail description. Use DET=S to display SQL statement only without db2 statistics. Use GN=generation to specify generation of explain output. Specify 0 for current generation, -1 for previous generatiion… The default (do not specify GN option) is all generations.
Use SU= option to display only for those queries with service unit greater than or equal to the thread hold specified.
Use HOSTVAR option to display host variable information.
Specify EDIT=Y to Edit the output instead of Browse.
Syntax: EXPLAINP [O=plan-owner] [PG=Program-Name] [QNO=[#|#1-#2]]
[PL=planname][DESC=Y|N] [DET=O|N|Y|S]
[GN=generation] [T=N]
[SU=service-unit-thread hold] [HOSTVAR] [EDIT=Y]
Line objects allowed: PL or PG, DM [stmt_no]
**BO-MO-MT**

## EXPLORE* - A pricing add-on for JRH-DB2I2

EXPLORE can be used to check if db2 package requires REBIND. It also can be use to check if db2 package meets your specified criteria.
Authorization required: SYSADM, or BINDADD with table access authorization.
Use **TYPE=REBIND** to check if selected PG lines require REBIND.
Use **TYPE=CHECK** default option together with CRIT and SU option to check if selected PG lines match your criteria.
[**O=tsoid**|plan_table owner] [**CL=tsoid**|collection ID] **[VER=C**|A]
For **TYPE=CHECK**, the following are valid **CRIT=** options:

R – TableSpace Scan
L - List Prefetch
HJ – Hybrid Join
SO – SORT
I0 – Index match column 0
MJ – Merge Scan Join
MX – Multiple Indexes Access
ALL – for all the listed criteria

For example, CRIT=R,I0,L for table space scan, or index match column 0 or list prefetch.
Use **SU=** option to display only for those queries with service unit greater than or equal to the thread hold specified.
Use **COND=AND**|OR to decide whether it is an AND or an OR condition when both CRIT and SU are selected. By default if not Specified, an **AND** is used.

Syntax: EXPLORE [**TYPE=CHECK**|REBIND]
[**O=tsoid**|plan-owner]
[**CL=tsoid**|collection-id]
[**VER=C**|A]
For TYPE=CHECK
[CRIT=R,I0,L,MJ,HJ,SO|ALL]
[SU=service-unit-threahold]
[CONT=AND|OR]
Line objects allowed: PG
**BO-MO**

**FETCH** Generate fetch into embedded SQL statements against selected line object. The host variables from DCLGEN dataset are mapped onto column name.
Syntax: FETCH MAP='dclgen dataset'
Line objects allowed: TB, AL, SY, VW, MT, TBC
**BO-MO-MT**

**FLASH** Generates dfsmsDSS JCL to Flash Copy DB2 Dataset.
The Source and Target must have the same database Structure
which includes the same Index Names and Same OBIDs (MIGR with OBID)
The generated JCL contains the following steps:

- STOP Target Db2 Objects
- IDCAMS Delete Target VSAM Datasets
- START Source Db2 Objects with ACCESS(RO)
- dfsmsDSS Flash Copy Source and Rename to Target objects
- START Source Db2 Objects with ACCESS(RW)
- START Target Db2 Objects with ACCESS(UT) .

When process Multiple line objects, use CONT=Y option to continue process the rest of the FC line object if there are any difference between source and destination object.
Syntax: FLASH [MACRO(your.ed.macro)] [CONT=Y] [CLONE=Y]
Line objects allowed: FC
**BO-MO**

**FLIST** List the content of a dataset. 'flist.dsname' is used to specify the name of the dataset.
Syntax: FLIST 'flist.dsname' [132|lrecl] [OUTDD=outputDDname]
Line objects allowed: None
**BO**

**FREE** Generate DB2 FREE commands against selected package or plan. KEEP=# option allows you to generate FREE command with # of version to keep for a db2 package. Specify CURRENT to generate FREE command for current version of the selected PG lines. You can not specify KEEP option when you select a CURRENT option.
Syntax: FREE [KEEP=0|#] [CURRENT]
Line objects allowed: PG, PL
**BO-MO-MT-WC**

## FTP** A pricing add-on with RXDB2I2

Use FTP to invoke and process FTP command thru RXDB2I2. It can be Processed as RXDB2I2 command option:
RXDB2I2 FTP ...
Or Processed inside RXDB2I2
RXDB2I2 idd=dd1
Lineobj ddname=dd1
DB2I2REX "FTP ..."
End_lineobj
In online mode, you can select lines in your work bench and then issue RXDB2I2 FTP command to invoke FTP to PUT the selected lines to a remote server. The selected lines are stored under //DD:TEMP.
Use INPUTDSN option to assign the dsn for FTP control statements
If not specified, Use //INPUT DD file as INPUT to FTP or
if no //INPUT DD, use yourID.DB2I2.FTP.INPUT as INPUT dsn to FTP.
You can edit the FTP control statement to fit your need.
Use RESET=Y to reset your entered password to 'password' to protect your password after FPT is done.
Syntax: FTP [INPUTDSN=input-dsname] [RESET=Y]
Line objects allowed: N/A
**BO**

**FU** Generates FU- function information from a selected line object.
Syntax: FU (V6 or above only)
Line objects allowed: TB, VW, PL, PG, MT, SQ
VA (for v11+)
**BO-MO-MT-WC**

**GENVCAT** Generates VCAT information from the selected line objects. VOL=* option generate IDCAMS define with VOLUMES(*).VACT option assign new VCAT name. DB option assign new DBNAME.
Specify ALLOC option to override the space allocation:

Alloc_type can be CYL, TRK, PAGE; if omits alloc_type, DB2I2 uses device type information from ICF catalog as default.
Pri can be HIARBA, HIURBA or a numeric number. If omits pri, DB2I2 use primary allocation information from ICF catalog as default.
Sec should be a numeric number. If omits sec, DB2I2 use secondary allocation information from ICF catalog as default.

Syntax: GENVCAT [VOL=*] [%=### [CYL|TRK|_] ]
[ALLOC=(alloc_type,pri,cse)] [VCAT=new-vcatname]
[DB=new-dbname]
Line objects allowed: TS, TP, IX, IP,DS, IS, ISP
TSC, TPC, IXC, IPC, DS, ISC, ISPC (V9 or above)
**BO-MO-MT**

**GRANT** Generates GRANT DCL for the selected line objects.
Syntax: GRANT [SQLID=id] [TO=to-user] [grant options]
Line objects allowed: AL, BP, CL, DB, PG, PL, SG, TS, TB, US, VW,CO
(DT, FU, SP, SH, TR for V6 or above)
(MT, SQ for V8 or above)
(RO,TBC for V9 or above)
(VA for V11+)
**BO-MO**

**HELP or ?** Displays HELP screen for DB2I2 commands, system defined UDF ,DB2I2 TSO command and Global Variables. Global variable can be wild card with %. For example, Help &abc% display all global variables prefixed with &abc.
Syntax: HELP|? [db2i2 command|*UDF|*db2i2 TSO command| &globalvar]
**O**

**HELPLO** Displays HELP screen for all available DB2I2 commands for any valid line object.
Syntax: HELPLO [valid line object]
**O**

**HMIGRATE** Invokes HSM HMIGRATE to migrate DS line objects or AR-archive log line objects.
Syntax: HMIGRATE
Line objects allowed: DS, AR
**BO-MO-MT**

**HRECALL** Invokes HSM HRECALL to recall DS line objects or AR-archive log line object.
Syntax: HRECALL
Line objects allowed: DS, AR
**BO-MO-MT**

**IMPACT** Display dependent line objects from the selected line object.
Syntax: IMPACT
Line objects allowed: AL, DB, TS, TB, IX, SY, VW
(DT, FU, SP, for V6 or above)
(MT, SQ for V8 or above)
(TBC for V9 or above)
(PG for V10 or above)
**BO-MO-MT**

**INFO** Display SSID information and connection information.
Syntax: INFO
**BO**

**INSERT** Generate SQL INSERT statements for the selected line objects.Use MAP option to generate embedded SQL. RUN option generates INSERT from RUN output. Use COMMIT=# to specify commit frequency. Use SQLTERM(?) to specify sql terminator. Use CHAR=HEX to generate CHAR or VARCHAR in HEX format
Syntax : INSERT [MAP=’dclgen dsn’]
[RUN='db2i2.run.output' COMMIT=# SQLTERM(?)
CHAR=HEX]
Line objects allowed: TB, AL, SY, VW, MT
(TBC for V9 or above)
**BO-MO-MT**

**IP** Show IndexPart usage for a selected line object.
Syntax: IP
Line objects allowed: DB, TS,, TB, MT, IX, IS, ISP, TP
TSC, TBC, IXC, ISC, ISPC, TPC (V9 or above)
**BO-MO-MT-WC**

**IPC** Show IndexPart Clone usage for a selected line object. (V9 or above)
Syntax: IPC
Line objects allowed: DB, TS,, TB, MT, IX, IS, ISP, TP
TSC, TBC, IXC, ISC, ISPC, TPC
**BO-MO-MT-WC**

**IS** Show IndexSpace usage for a selected line object.
Syntax: IS
Line objects allowed: DB, TS,, TB, MT, IX, IP, ISP, TP, PL, PG
TSC, TPC, TBC, IXC, IPC, ISPC (V9 or above)
**BO-MO-MT-WC**

**ISC** Show IndexSpace Clone usage for a selected line object. (V9 or above)
Syntax: ISC
Line objects allowed: DB, TS,, TB, MT, IX, IP, ISP, TP, PL, PG
TSC, TPC, TBC, IXC, IPC, ISPC
**BO-MO-MT-WC**

**ISP** Show IndexSpacePart usage for a selected line object.
Syntax: ISP
Line objects allowed: DB, TS,, TB, MT, IX, IS, IP, TP
TSC, TPC, TBC, IXC, ISC, IPC (V9 or above)
**BO-MO-MT-WC**

**ISPC** Show IndexSpacePart Clone usage for a selected line object. (V9 or above)
Syntax: ISPC
Line objects allowed: DB, TS,, TB, MT, IX, IS, IP, TP
TSC, TPC, TBC, IXC, ISC, IPC
**BO-MO-MT-WC**

**IX** Show IndeX usage for a selected line object.
Syntax: IX
Line objects allowed: DB, TS, TB, IS, ISP, PL, PG
TSC, TBC, ISC, ISPC (V9 or above)
**BO-MO-MT-WC**

**IXC** Show IndeX Clone usage for a selected line object. (V9 or above)

Syntax: IXC
Line objects allowed: DB, TS, TB, IS, ISP, PL, PG
TSC, TBC, ISC, ISPC
**BO-MO-MT-WC**

**JOBCARD** Set up JOBCARD Information. Please specify this if you want to use any JCL generated from DB2I2. Since any CC > 4 consider to be sever error in DB2I2, specify COND=(4,LT) option when you enter your jobcard information.
Syntax: JOBCARD
**O**

**LISTC** Generates IDCAM List Catalog information against select line object. The summary extent and usage information is displayed. EXT(##) option direct DB2I2 to only list information when extents > ##. TSIX option allows DB2I2 to display TP or IP information instead of DS information. IN option insert output directly into your edit session. Use SIZE=#### option to generate <NEWJOB> token on the output line for every #### cylinders. Use VOLSER=# to generate a list of DS with 6 digit Numeric volser only (TAPE)
Use VOLSER=volser to generate a list of DS a specific volser only
Please follow the rules below for wild card with,DS,line object:
Use,*,to represents one qualifier
Use,**,to represents one or more qualifiers
A double asterisk cannot precede or follow any characters it must be preceded or followed by either a period or a blank,
Example: DS vcat.dsndbd.db*.** (correct)
DS vcat.dsndbd.db** (not correct)
Syntax: LISTC [EXT(##)] [TSIX] [IN] [SIZE=####] [VOLSER=#|volser]
Line objects allowed: TS, IX, TP, IP, DS, IS, ISP
TSC, TPC, IXC, IPC, ISC, ISPC (V9 or above)

**BO-MO-MT-WC**

**LISTDEF** In DB2 V7 or avove, generates LISTDEF DB2 utility control statement for selected line objects. Specify ODSN=odsn(*) to save output to multiple members of a PDS. Specify LISTNM=mylist option at end of the line object together odsn(*) will override listname from selection panel and mylist also is used as the member name for the output pds.
Syntax: LISTDEF [IDSN=IDSN='input.listdef.skelton' ]
[ODSN=odsn[(*)]]
[LISTNM=mylist]
[PARMUTIL=]'parmutil.dsn']
Line objects allowed: DB, TS, TP, IX, IP, TB, IS, ISP, MT
TSC, TPC, TBC, IXC, IPC, ISC, ISPC (V9 or above)

**BO-MO-MT**

**LOAD** Generate DB2 LOAD utility JCL for selected table with calculated space for work files. If multiple TB or MT line objects are selected, you can use # on each TB line to indicate the estimated # of rows to be loaded. Make sure you select 0 on the estimated row field on the selection screen to allow estimated row to be selected from the TB or MT line.
Use SYSIN=sysin.dsn and SYSREC=sysrec.dsn at end of the TB line object to assign the SYSIN and SYSREC input.
Use RESUME=YES at end of a TB line object to indicate the LOAD RESUME override for that particular TB line.
Specify OVERRIDE command option to overrides the SYSIN control card with the information from the 'load.parmutil.dsname' file.
Syntax : LOAD [[PARMUTIL=]'parmutil.dsn'] [OVERRIDE]
[FNM=ID] [WKUNIT=TAPE,0|#]
[LISTDEF=listdef.dsname[(patt*)]]
[TEMPLATE=template.dsname]
[OPTIONS=options.dsname] v7 or above
Line objects allowed: TB or MT tbname [#] [SYSIN=sysin.dsn]
[SYSREC=sysrec.dsn]
[RESUME=YES]
TBC (V9 or above)

**BO-MO**

## MAIL** A pricing add-on with RXDB2I2

Use MAIL to Send an Email/Message thru SMTP server
All options Except CC and ATTACH are Required fields.
Where CLASS is SMTP Output Class, WRITER is SMTP writer; PRINT=Y to send email message to SYSOUT; HOST is your Host domain name for SMTP; FROM is you email address;
TO is to addresses separated by comma or (DSN=add1,add2,..) or (DD=dd1,dd2,.)
CC is your email CC address separated by comma or (DSN=add1,add2..) or (DD=dd1,dd2)
SUBJECT is the subject of this email; A @ at end of the SUBJECT text is required to end the Subject.
BODY is the body text from either multiple input DD with IDD=dd1,dd2.. or with IDSN – input dataset name;
Use optional ATTACH option to attach text files with format of
source-dsname,target-dsname;s2-dsname,t2-dsname;…
Syntax: MAIL CLASS=smtp-class WRITER=smtp-writer [PRINT=Y]
HOST=your.host.com
FROM=your-name@your.host.com
TO=to1@host.com,to2@host2.com,. or
TO=(DD=dd1,dd2,..) or TO=(DSN=dsn1,dsn2..)
CC=cc1@host.com,cc2@host2.com,.. Or
CC=(DD=dd1,dd2,..) or CC=(DSN=dsn1,dsn1..)
SUBJECT=mail-subect@
BODY=(DD=dd1,dd2,..) or BODY=(DSN=body.dsname)
[ATTACH=dsn1,newname1;dsn2,newname2... ]
Line objects allowed: N/A

**B**

**MIGR** Generate migration DB2I2 script which includes all the DDL, IDCAM Defines, BIND plan, BIND package and DCL GRANT for selected objects. You can modify the generated DB2I2 scripts to fit your need. The scripts can then be executed by using the DB2I2 EXEC command. Specify %=### at the end of line object to override space allocation. Specify #PART=### and PTX=index-name to convert a non-partition TS to a Partition TS. Specify SQLTERM option in Db2 V6 to assign SQL terminator. Use MAXASGN option to generate DDL with Identity column START WITH maxassignval + increment. Use OBID option to generate OBID option for CREATE TABLE DDL.
Use POSTMIGR ED macro to comment out duplicate VIEW, ALIAS, SYNONYMS, BIND and GRANT.
Syntax: MIGR [AL=Y] [SY=Y] [VW=Y] [BIND=Y] [GRANT=Y]
[RI=B|C|P|N][%=### [CYL|TRK|_] ]
[ALLOC=(alloc_type,pri,cse)]
(The following options are for V6 or above)
[SQLTERM(?)] [DT=Y] [LO=Y] [FU=Y] [TR=Y] [SQ=Y]
[MT=Y|N|S] [MAXASGN] [OBID]
[CRE=new_creator] [DB=new_dbname] [CL=new_collid]
[SG=new_stogroup] [VCAT=new_vcatname] [O=new_owner]
[Q=new_qualifier] [SH=new_schema]
Line objects allowed: AL, DB, TS, TB, IX, SY, VW, SG ,RI,
DT, FU, SP, TR, MT, SQ
TBC, TC, MS, PM
VA (for v11+)

**BO-MO-MT**

**MODIFY** Generate DB2 MODIFY utility JCL for the selected line objects.Additional job step issues TSO DELETE for all the image copy data sets deleted from Ibm system catalog.
Syntax: MODIFY [[PARMUTIL=]'parmutil.dsn']
[LISTDEF=listdef.dsname[(patt*)]]
[OPTIONS=opt.dsname] v7 or above
Line object allowed: TS, TP, IX, IS
TSC, TPC (V9 or above) for modify recovery

**BO-MO-MT**

**MS** Show Column Mask for a selected TB line object.
Syntax: MS
Line objects allowed: TB

**BO-MO-WC**

**MT** Show Material query Table for a selected line object.
Syntax: MT
Line objects allowed: DB, TS, TP, TB, IX, IP, MT, AL,VW, SY, PL, PG
DT, FU, SP, TR, SQ, IS, ISP

**BO-MO-MT-WC**

**OI** Show Object Id for a selected line object.
Syntax: OI
Line objects allowed: DB, TS,, TB,  IX,, MT, IS
**BO-MO-MT-WC**

**OPTIONS** In DB2 v7 or above generates DB2 utility OPTIONS control statements.
Syntax : OPTIONS [IDSN=options.indsn] [ODSN=options.outdsn]
Line objects allowed: N/A
**O**

**PACKIT** Generate DB2 BIND command for the selected  DBRM or plan.
Syntax : PACKIT [CL=collection-ID] [O=owner] [Q=qualifier] [MEM=*]
Line objects allowed: DM, PL
**BO-MO-MT-WC**

**PARMUTIL** Generate utility parameter control statement file for the following DB2 utilities: REORG, COPY, LOAD, RUNSTATS, MODIFY, REPAIR or RECOVER, REBUILD, CHECK, REPORT,DCLGEN (LISTDEF, UNLOAD, CPY2CPY for DB2 V7 or above only).
Syntax: PARMUTIL parmutil-util-option [ODSN=]'parmutil.dsname'
where parmutil-util-option must be one of the utility list above
Line objects allowed: none
**O**

**PG** Displays associated DB2 Package information for the selected line objects. Specify TR=N to generate no trigger package. Specify TYPE= option to qualify Type of SQL. I for Insert, U for Update, D for Delete, S for Select and A for all SQL type and is the Default type option. Specify SARG=search-arg to specify search arguments. For Example, SARG=INSERT or SARG=INSERT%PRODUCT.
Syntax: PG [TR=Y|N] [TYPE=A|SIUD][SARG=search-arg]
Line objects allowed: TS, AL, TB, SY, VW,  IX, PL, DB,
SP, FU, TR, MT, SQ, PG
TSC, TBC, IXC, CO
VA (for v11+)
**BO-MO-MT-WC**

**PGAUTH** Display Package Authorization information for the selected line objects.
Syntax : PGAUTH [GRANTOR|GRANTEE]
Line objects allowed: PG, US
RO  (V9 or above)
**BO-MO-MT-WC**

**PL** Displays associated DB2 Plan information for the selected line objects. . Specify TYPE= option to qualify Type of SQL. I for Insert, U for Update, D for Delete, S for Select and A for all SQL type and is the Default type option. Specify SARG=search-arg to specify search arguments. For Example, SARG=INSERT or SARG=INSERT%PRODUCT.
Syntax: PL [TYPE=A|SIUD][SARG=search-arg]
Line objects allowed: TS,  AL, TB, SY, VW,  IX, PG, DB
SP, FU, TR, MT, PL
TSC, TBC, IXC,CO
**BO-MO-MT-WC**

**PLAUTH** Display Plan Authorization information for the selected line objects.
Syntax: PLAUTH [GRANTOR|GRANTEE]
Line objects allowed: PL, US
RO  (V9 or above)
**BO-MO-MT-WC**

**PM** Show Row Permissions for a selected TB line object.
Syntax: PM
Line objects allowed: TB
**BO-MO-WC**

**QBUILD** Generates SQL WHERE predicates directly from selected line objects.
Syntax: QBUILD [F1=field name 1] [F2=field name 2] [F3=field name 3] [F4=field name 4]
Line objects allowed: any valid line objects except ,AC, AR, CI,  CP, CU, GV, RL
**BO-MO-WC**

**QUIESCE** Generates DB2 QUIESCE utility JCL for the selected line objects.
Syntax: QUIESCE [WRITE=NO] [TABLESPACESET]
[LISTDEF=listdef.dsname[(patt*)]] [OPTIONS=options.dsname] v7 or above
Line objects allowed: TS, TP, TSC, TPC
**BO-MO-MT**

**RBA** Generate all available RBA/LRSN points from SYSIBM.SYSCOPY table for selected line objects. Specifies yyyy-mm-dd command option to restrict only the RBA/LRSN point not greater than the selected date be returned.  Specify JU004 option to merge the RBA output with output from a previous DSNJU004 command output. Specify DETAIL=Y to display RBA line detail.
Syntax: RBA [yyyy-mm-dd] [JU004='dsnju004.output'] [DETAIL=N|Y]
Line objects allowed: TS,TP,IX,IP, IS, ISP
TSC, TPC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO-MT-WC**

**REBIND** Generate DB2 REBIND commands for the selected package or plan.. DET=Y option generates all REBIND options. The default is DET=N, no rebind options are generated. Use EXPLAIN=Y option to generate DB2 REBIND command with EXPLAIN(YES) option.
Syntax: REBIND [DET=N|Y] [EXPLAIN=Y]
Line objects allowed: PG, PL
**BO-MO-MT-WC**

**REBUILD** Generate DB2 REBUILD index utility JCL for the selected line objects. (V5 and above).
Syntax: REBUILD [[PARMUTIL=]'parmutil.dsn'] [DFLTSP=(1,1|pri,sec)]
[FNM=ID] [WKUNIT=TAPE,0|#]
[LISTDEF=listdef.dsname[(patt*)]]
[TEMPLATE=template.dsname]
[OPTIONS=options.dsname]  v7 or above
Line objects allowed: TS, IX, TP, IP, IS, ISP
TSC, TPC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO**

**RECOVER** Generate DB2 RECOVER utility JCL for the selected line objects. Specify RBLDIX=N|Y|A at the end of line object to override the rebuild index panel option. N-no rebuild, A-rebuild index(ALL), Y-rebuild  index only the selected part
Syntax: RECOVER [[PARMUTIL=]'parmutil.dsn'] [DFLTSP=(1,1|pri,sec)]
[FNM=ID] [WKUNIT=TAPE,0|#]
[LISTDEF=listdef.dsname[(*)]]
[OPTIONS=opt.dsname]  v7 or above
Line objects allowed: TS, IX, TP, IP, IS, ISP
TSC, TPC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO**

**REORG** Generate DB2 REORG utility JCL for the selected tablespace or index. If 'reorg.parm.dsname' is specified, the reorg option is generated based on the 'reorg.parm.dsname'. Use option RCHK to generate REORGCHK step before REORG step. Specify OVRD option to assign reorg override table for REORGCHK. Specify MAPTABLE option to override MAPTABLE option from REORG panel.
In v6 for UNLOAD or DISCARD option, you can specify SYSREC= and SYSPUNCH= at the end of the line object to assign SYSREC and SYSPUNCH data set name. Specify MAPTABLE=rmapping_table at the end of the line object to override the MAPPING table for the online reorg. Mapping_table specified can include <JOBNM> as part of the specification which will replace it with the generated job name.  Specify MAPTABLE=AA.<JOBNM> generates actual mapping_table with AA.J0001 if job name is J0001.
Syntax: REORG [[PARMUTIL=]'parmutil.dsn']
[RCHK [OVRD=reorg_override_table]]
[DFLTSP=(1,1|pri,sec)]
[FNM=ID] [WKUNIT=TAPE,0|#]
[MAPTABLE=mapping_table]
[LISTDEF=listdef.dsname[(patt*)]] [TEMPLATE=template.dsname]
[OPTIONS=options.dsname] v7 or above
Line objects allowed: TS, IX, TP, IP, IS, ISP
[SYSREC=sysrec.dsn] [SYSPUNCH=syspunch.dsn]
[MAPTABLE=reorg_mapping_table]
TSC, TPC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO**

**REORGCHK** Use REORGCHK to set condition code, in batch mode, to CC1, if a tablespace, tabelpart, index or indexpart does not require to run REORG. Set to CC2 if it does require to run REORG. The default CC1 is 0 and CC2 is 1. Use OVRD option to override and force a REORG. DB2I2.REORG_OVERRIDE is the default if no OVRD specified. Please refer to HELP *DDLREORG for the detail of the REORG override table definition.
Syntax: REORG [RC(0,1 | CC1,CC2)]
[OVRD=DB2I2.REORG_OVERRIDE | your.reorg_override_table]
Line Object Allowed: TS, TP, IX, IP, IS, ISP
TSC, TPC, IXC, IPC, ISC, ISPC (V9 or above)
**BO**

**REPAIR** Generate DB2 REPAIR utility JCL for the selected tablespace or index.
Syntax: REPAIR [[PARMUTIL=]'parmutil.dsn']
Line objects allowed: DB,TS, IX, TP, IP, IS, ISP
TSC, TPC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO**

**REPORT** Generate DB2 REPORT utility JCL for the selected line objects.
Syntax: REPORT [[PARMUTIL=]'parmutil.dsn']
[LISTDEF=listdef.dsname[(*)]]
[OPTIONS=options.dsname] v7 or above
Line objects allowed: TS, TP, (IX, IP, IS, ISP for V6 or above)
**BO-MO-MT**

**RESETG** Reset all Global Variables.
Syntax: RESETG
Line objects allowed: N/A
**BO**

**REVOKE** Generates REVOKE DCL for the selected line objects.
Syntax: REVOKE [FROM=from-user]
[FROMROLE=from-role]
[SQLID=sqlid for SET SQLID and By Granter]
[INCLUDE=Y|N to include dependent privileges]
Line objects allowed: AL, BP, CL, DB, PG, PL, SG, TS, TB, US,VW
(DT, FU,SP,SH for V6 or above only)
(MT, SQ for V8 or above only)
(RO, TBC for V9 or above only)
(VA for V11+)
**BO-MO-MT**

**REXX** Use REXX DB2I2 command in batch mode to invoke REXX Exec or TSO CLIST with a stream of DB2I2 commands. Either IDD= or IDSN command option is required for this command. Use command option IDD= to indicate the DDNAME of the REXX/CLIST source. Use IDSN= to indicate the DSNAME of the REXX/CLIOST source. Specify DSPRE for work dataset prefix.
Syntax: REXX [IDD=input.ddname|IDSN=input.dsname]
[DSPRE=work.dataset.prefix]
Line objects allowed: none
**BO-MO**

**RI** Generate Referential Integrity line objects from the selected TB line object.
Syntax: RI
Line objects allowed: TB, DB
**BO-MO-WC**

**RSAUTH** Display Resource Authorization information for the selected line objects.
Syntax: RSAUTH [GRANTOR|GRANTEE]
Line objects allowed: BP, CL, SG, TS, US, DT
RO for V9 or above
**BO-MO-MT-WC**

**RTAUTH** Display Routine Authorization information for the selected line objects.
Syntax: RTAUTH [GRANTOR|GRANTEE]
Line objects allowed: FU, SP, US
RO for V9 or above
**BO-MO-MT-WC**

**RUN** Produces result for specified SQL SELECT statement block. IN option returns result within your workbench edit session. Use the LIMIT(#) option to change the run result fetch limit 300. T=Y default option display the result column heading. T=N suppress heading display. The host variable option allows you to define host variable in Upper case &N=H-vvvv-H in the query and substitute them during run. NOTFOUND(SKIP #) option can be specified for batch to allow a not found bypass commands option. Specify DLM= to assign output field delimiter. You can use –INC to include part of your query from external source inside your SQL block. Specify DURATION=Y to display Start and End timestamp and the Duration information. Use BR option to create break point.
Syntax: RUN [LIMIT(300|#)] [IN] [T=Y|N] [host variable option] [DLM=?] [NOTFOUND(CONTINUE|SKIP #)] [EDIT=N|Y] [TRUNC=N|Y][DURATION=N|Y] [BR=column-name]
Line objects allowed: SQL blocks
**BO-MO-multiple line one Select SQL**

**RUNSTATS** Generate DB2 RUNSTATS utility JCL for the selected tablespaces or indexes. If 'runstats.parm.dsname' is specified, RUNSTATS option is generated base on the 'runstats.parm.dsname'.
Syntax: RUNSTATS [[PARMUTIL=]'parmutil.dsn']
[LISTDEF=listdef.dsname[(patt*)]] [OPTIONS=opt.dsname] for v7 and above
Line objects allowed: TS, IX, TP, IP
**BO-MO-MT**

**RXDB2I2**** – DB2I2 Rexx Extender A pricing add-on for JRH-DB2I2. It allows you

- To process your REXX exec directly from your ISPF Edit session within DB2I2.
- To process DB2I2 commands directly from you REXX exec thru DB2I2REX interface
- Stream line process in both ONLINE and BATCH process.
- Use &hostvar=H-hostvar-H to pass host variable to rxdb2i2 script. Define your host variable in Upper case as &hostvar=H-hostvar-H to avoid conflict with existing Global variables or command options.

The example below run a query to pickup the last QUIESEC RBA. If found then issue SETRBA command for database ABC, otherwise issue message and set RC to 4 with RXRC command and RXERROR(N) to reset error status.

```
LINEOBJ DDNAME=DB2I2RXL
  Select 'db2i2rex setrba', Hex("START_RBA")
  From "SYSIBM"."SYSCOPY"
  Where
    DBNAME = '&H-DB-H'
  And   ictype = 'Q'
  Order by 2 desc
  Fetch first 1 row only
END_LINEOBJ
DB2I2REX "RUN IDD=DB2I2RXL ODSN=T2 &H-DB-H=ABC T=N"
If RxNOTFND() \= 'Y' Then
   DB2I2REX "RXDB2I2 IDSN=T2"
Else
Do
   x = RxError(N)
   Say " ** No Quiesce Point Found for selected Database"
   Say " ** Quiesce Point is Not Set"
   x = Rxrc(4)
   Return 4
End
```

There are 3 extended Rexx Functions are added when using Rxdb2i2:
RXNOTFND() Return Not Found Status from last command
The vlaue can be 'Y' for Not Found and '' or 'N' for others
RXERROR() Return Error Status from last command
The vlaue can be 'Y' for Not Found and '' or 'N' for others
RXERROR(N) Set Error status to 'N'
RXRC() Return The RC or zispfrc from last Command
RXRC(?) Set Last RC to ? where ? must be Numeric

Syntax: RXDB2I2 &hostvar=hostvar
Line objects allowed: Any valid REXX statement plus
Db2i2 line objects between
**LINEOBJ** [DDNAME=DB2I2RXL|DDNAME=ddname]
& **END_LINEOBJ**
Db2i2 commands prefix with **DB2I2REX**
**BO-MO**

**SDSF** Interface to SDSF to display output queue information for selected job name and job number. By specifying ODSN option or running SDSF in batch mode, it allows you to spool the output queue information. Use DDNAME option to narrow down only to specified DDNAME output information.
Syntax: SDSF ISPF-SDSF-primary-menu-option [DDNAME=dd1,dd2..]
Line objects allowed: JI
**BO-MO**

**SELECT** Generate SQL SELECT statements for the selected table, alias, synonyms or view. Use PRE option to assign correlation name. Use JOIN option to assign join type and use TYPE option to choose the type of join.
Syntax: SELECT [PRE=corr-name]
[JOIN=N|Y|LEFT|RIGHT|FULL [TYPE=RI|MATCH]]
Line objects allowed: TB, AL, SY,VW, MT
TBC for V9 or above
**BO-MO-MT**

**SELPATHU** Generates SQL UPDATE statement for SYSIBM catalog table which influence selection path of the DB2 Optimizer.
Syntax: SELPATHU
Line object allowed: CI, CU
**BO-MO-MT**

**SELPATHV** Generates CI and CU line objects. The CI and CU lines display DB2 catalog information which influence selection path of the DB2 Optimizer.
Syntax: SELPATHV [OPTION=REPORT|CUCI]
Line object allowed: TB, MT
**BO-MO-WC**

**SETG** Sets Global Variables.
Syntax: SETG
Line object allowed: GV
**BO-MO**

**SETRBA** Uses SETRBA command to set the INCORE RBA which can then be used in the recover to RBA or recover to LOGPOINT process. To set INCORE T=I RBA or RestoreBefore RBA T=B just position the cursor on any of the valid RBA field and issue SETRBA or issue SETRBA command followed by a 12-bytes-Hex. Use +n or –n to add or substract a integer number from the selected RBA.
Syntax: SETRBA [12-bytes-Hex] [+n] [-n] [T=I|B]
Line object allowed: any edit line with valid RBA field
**BO**

**SHAUTH** generates SH – schema authorization from selected line objects.
Syntax: SHAUTH (v6 or above only)
Line object allowed:_ SH, US
RO for V9 or above
**BO-MO-MT-WC**

**SNAPSHOT** generates DSN1PRNT snapshot for a selected page of a line object. The DSN1PRNT options can be any valid DSN1PRNT options except the NUMPARTS, which is derived from the selected line object.
Syntax: SNAPSHOT pgno-in-hex [DSN1PRNT options]
Line object allowed:_ TS, TP, IX, IP, IS, ISP
TSC, TPC, IXC, IPC, ISC, ISPC (V9 or above)
**B-MO-MT**

**SP** generates SP – stored procedure line object information from selected line objects.
Syntax: SP (V6 or above only)
Line object allowed:_ TB , VW, PL, PG, MT, SQ
TBC for V9 or above
VA for V11+
**BO-MO-MT-WC**

**SPACE** allows you to estimate space requirement for a db2 table or an index. You can specify row count and %compressed at end of TB line or row count and key card at end of IX line to bypass the estimation screen.
Syntax: SPACE
Line object allowed: TB , IX
**BO-MO-MT**

**SPACEADJ** allows you to generate DSADJ line objects based on the row count for table partition and row count and key card for index partition. The output format is TP dbname.tsname partno ALLOC=(alloc_type,pri,sec) for table partition and IP ixcreator.ixname partno ALLOC=(alloc_type,pri,sec) for index partition. Use CYL or TRK to adjust to cylinder or track boundary.
Syntax: SPACEADJ [CYL|TRK|PAGE]
Line object allowed: AI , AT
**BO-MO-MT**

**SQ** generates SQ – sequence line object information from selected line objects.
Syntax: SQ (V8 or above only)
Line object allowed: FU
**BO-MO-MT-WC**

**SQAUTH** generates SQ – sequence authorization from selected line objects.
Syntax: SQAUTH (v8 or above only)
Line object allowed: SQ, US
RO for V9 or above
**BO-MO-MT-WC**

**SSID(ssid)** Set DB2 subsystem ID. Issue SSID(?) to display all SSID information
Syntax: SSID(ssid) or SSID(?)
**BO**

**START** Issue DB2 START command for the selected line objects.
Syntax: START [db2 start command options]
Line objects allowed: DB,TS, IX, TP, IP, IS, ISP
TSC, TPC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO-MT**

**STATS** Produces DB2 catalog statistic summary for selected database, tablespace, table or indexes and their dependent objects. The statistics recommendation assists you to identify potential problem. Use TSIX option to return in TS, TP, IX or IP line object. Use OPTION=REORGTSIX or OPTION=REORGTPIP to return line object in TSIX or TPIP needed to be REORGed.
Syntax: STATS [TSIX] [OPTION=ALL|REORGTSIX|REORGTPIP]
Line objects allowed: DB, TS, TB, IX, TP, IP, IS, ISP, PL, PG, CO, IC
**BO-MO-MT-WC**

**STATUS** Use~STATUS}to display pageset status explaination.
In Online mode, Point the cursor to the pageset-status-abbr
from display output. Or enter pageset-status-abbr as part of
the command option for both online and batch mode to display
the explaination of pageset-status-abbr.
The pageset-status-abbr can be the following seperate with ,
ARBDP AREO* ACHKP AREST AUXW CHKP COPY DEFER GRECP
ICOPY INDBT LPL LSTOP OPENF PSRCP PSRBD RBDP RBDP* RECP
REFP RELDP REORP REST RESTP RO RW STOP STOPE STOPP UT
UTRO UTRW UTUT WEPR
Line objects allowed: Display output with pageset-status
**BO**

**STOP** Issue DB2 STOP command against selected database, tablespace or indexes.
Syntax: STOP
Line objects allowed: DB, TS, IX, TP, IP, IS, ISP
TSC, TPC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO-MT**

**STOSPACE** Use STOSPACE to generate Db2 STOSPACE Utility JCL against selected SG line objects.
Syntax: STOSPCE
Line objects allowed: SG
**BO-MO**

**SUPERC** Use SUPERC to invoke IBM SUPERC to compare the content of the newds and oldds. Use optional superc-parm such as CMPCOLM 16:118 for comparing the output for EXPLAIN/EXPLAINP command.
Syntax: SUPERC newds oldds [ODSN='output.dsname'] superc-parm
Line objects allowed:
**BO**

**SUPERCS** Use SUPERCS to invoke IBM SUPERC SEARCH FOR to search the specified string from selected dataset..
Syntax: SUPERCS search-dsn search-string [ODSN='output.dsname']
Line objects allowed:
**BO**

**SUPPORT** Use Support command to communicate with DB2I2 Support team.
Syntax: SUPPORT
Line objects allowed: N/A
**O**

**SY** Generate Synonyms line objects from the selected line object.
Syntax: SY
Line objects allowed: TB, VW, PL, PG, MT
TBC for V9 or above
**BO-MO-MT-WC**

**SYSIBM(creator)** Set DB2I2 catalog table creator ID. Default is SYSIBM
Syntax: SYSIBM(mirror-table-crator|SYSIBM)
**BO**

**TAG** Tags a SYSCOPY line for RECOVER or DSN1COPY to identify RBA point of time recovery or TOCOPY image copy dataset name. Or tag a active log, archive log , check point or archive log rba line.
Syntax: TAG
Line objects allowed: syscopy line, mymenu line,AC,AR,CP,RL
**O**

**TB** Shows associated DB2 tables for specified line objects.
Syntax: TB
Line objects allowed: DB, TS, TP, IX, IP, IS, ISP, PL, PG, AL, VW, SY
DT, FU, TR, SP, MT, SQ
IXC, IPC, TSC, TPC, ISC, ISPC (V9 and above)
**BO-MO-MT-WC**

**TBAUTH** Shows table authorizations for specified line objects.
Syntax: TBAUTH
Line objects allowed: AL,VW,TB, MT
TBC for V9 or above
**BO-MO-MT-WC**

**TBC** Shows associated DB2 Clone tables for specified line objects.
Syntax: TBC
Line objects allowed: DB, TS, TP, IX, IP, IS, ISP, PL, PG, AL, VW, SY
DT, FU, TR, SP, MT, SQ
IXC, IPC, TSC, TPC, ISC, ISPC (V9 and above)
**BO-MO-MT-WC**

**TEMPLATE** In DB2 V7, create TEMPLATE control statement to be used with other DB2 utilities. The template-option can be one of the following: CHECKDATA,CHECKIX,CHECKLOB,COPY,CPY2CPY,LOAD,MERGECPY, REBUILD,REORGIX,REORGTS,UNLOAD. Use IDSN option to clone existing TEMPLATE. Or leave out IDSN to generate a new set of template.
Syntax: TEMPLATE template-option [IDSN=input.skelton] [ODSN=output.file]
Line objects allowed: N/A
**O**

**TERM** Issues a Terminate Utility command against a select display utility line with UTILID = utilid
Line objects allowed: A display utility line with UTILID = utilid
**O**

**TOKENSCN** Use TOKENSCN to scan the specified 'load.library' to check if the consistent token matches. If optional member is specified the scan is done interactively, otherwise, a superc scan batch job is generated.
Syntax: TOKENSCN 'load.library[member]'
Line objects allowed: PG,DM
**O**

**TP** Show TablePart usage for a selected line object.
Syntax: TP
Line objects allowed: DB, TS, TB, IX, IP, IS, ISP, MT
TBC, TSC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO-MT-WC**

**TPC** Show TablePart Clone usage for a selected line object.
Syntax: TPC
Line objects allowed: DB, TS, TB, IX, IP, IS, ISP, MT
TBC, TSC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO-MT-WC**

**TR** Shows associated DB2 Triggers for specified line objects.
Syntax: TR (v6 or above only)
Line objects allowed: DB, TB, PG
VA (for V11+)
**BO-MO-MT-WC**

**TRACK** A pricing add-on with RXDB2I2**
Use TRACK in Batch Mode to Extract SDSF output.
Use ODSN or ODD option to store the Extracted output.
Use CURRENT option to Extract the Current Running Job information
Line Object is not needed when you use CURRENT option.
Use DDNAME option to specify stepname and ddname combination to be extracted. All selected Job information will be extracted when
No DDNAME option specified. Specify DDNAME=JES2.JESMSGLG for Jes2 Job Log Information.
Each stepname.ddname are separated by a comma
Syntax: TRACK ODSN=output.dsname|ODD=outputDD
[DDNAME=stepnm.ddname,stepnm1.ddname1..]
[CURRENT]
Line objects allowed: JI
**B-MO-WC**

**TRAUTH** generates TR – trigger authorization from selected line objects.
Syntax: TRAUTH (v6 or above only)
Line object allowed: TR, US
RO for V9 or above
**BO-MO-MT-WC**

**TS** Shows associated DB2 Tablespaces for a specified line objects.
Syntax: TS
Line objects allowed: DB,TB, TP, IX, IP, IS, ISP, PL, PG, MT
TPC, TBC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO-MT-WC**

**TSC** Shows associated DB2 Clone Tablespaces for a specified line objects.
Syntax: TSC
Line objects allowed: DB,TB, TP, IX, IP, IS, ISP, PL, PG, MT
TPC, TBC, IXC, IPC, ISC, ISPC (V9 or above)
**BO-MO-MT-WC**

**TSIX** Shows associated DB2 Tablepart or Indexpart information from a selected DS line object.
Syntax: TSIX
Line objects allowed: DS
**BO-MO-WC**

**TSO** Use DB2I2 TSO to invoke TSO command.
Syntax: TSO [TSO command]
Line objects allowed: none
**BO**

The following are built-in TSO commands:

**FCPY** allows you to copy files or append to an existing sequential dataset.
Format: **TSO FCPY indsn outdsn [APPEND]**.

**FCPY2** is an enhanced version of FCPY. It has the same features as FCPY plus it allows you to specify IDSN/IDD and ODSN/ODD as input or output. It also allows you to keep the files allocated after FCPY2 is done with FREE=N.
Format: **TSO FCPY2 [IDSN=]indsn[|IDD=idd] [ODSN=]outdsn[|ODD=odd] [APPEND] [FREE=N]**

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**TWAIT** allows you to wait for time event.
Format: **TSO TWAIT [PERD|ACTL]hhmmssth**.
For example,
Use the following statement to wait for 3 minutes before resume execution:

```
TSO TWAIT PERD00030000
```

Use the following statement to wait until 4:00 PM before resume execution:

```
TSO TWAIT ACTL16000000
```

**CAPTBUFR** allows you to capture bufferpool information from DISPLAY BUFFERPOOL DETAIL output into a DB2 table.
Format:
**TSO CAPTBUFT Indsn-Outdsn-DB2.Buffer.Tbl-DB2ver**.

**READBUFR** allows you to display bufferpool information from the DB2 table which contain the output from CAPTBUFR.
Format:
**TSO READBUFR** ssid\location-DB2.Buffer.Tbl-Bpool-Outdsn

**DB2I2LOG** allows you to generate tracking job steps to existing JCL. It inserts a step before the first job step and after the last job step. The tracking steps insert the following TSO command before the first step and after the last step:

```
    TSO DB2I2TRK  your.tracking_table  STATUS
Where STATUS = 'S' for the start of the job          - before the first step
      STATUS = 'E' for the end of the job            - after the last step with
                                                       COND=(8,GE)
      STATUS = 'A' for the abend of the job          - after the last step with
                                                       COND=(8,LT)
      STATUS = 'A' for the abend of the job          - after the last step with
                                                       COND=((8,LT),ONLY)
```

To use this TSO command, you need to define the db2 tracking table. Please refer to Db2I2 Reference for detail about how to define the tracking db2 table. Make sure comment out COND=(4,LT) from your JOBCARD so that these job steps can be processed accordingly.
Format:
**TSO DB2I2LOG** jcl.input your.tracking_table
where jcl.input can be: my.jcl(aa*), My.test.* or My.*.jcl

**DB2I2TRK** allows you dynamically insert the following job tracking information into the specified db2 tracking table:

JOBNAME, JOBNUM, STATUS, LAST_UPD_TSTMP

To use this TSO command, you need to define the db2 tracking table. Please refer to Db2I2 Reference for detail about how to define the tracking db2 table.
Format:
**TSO DB2I2TRK** your.tracking_table [S|E|A]

**DR** allows you to display register database and generates recovery jobs based on the information from syslogrange.
Format:
**TSO DR '**register.database.dataset' outfile-prefix Y|N [track_table_name]
Where

'register.database.dataset' is a sequential file contains the following:

```
        1sst record    DRPRMRPT='report.-recovery-parmutil'
        2nd record   DRPRMRCV='recovery-parmutil'
        3rd record    database report-jobname  recovery-jobname
    Example of a register database dataset:
        DRPRMRPT='JRHJ.PARMUTIL(REPORTDR)'
        DRPRMRCV='JRHJ.PARMUTIL(RECOVRDR)'
        PRODDB1   DB1J1  DB1##
        PRODDB2   DB2J2  DB2##
```

Specify ## on recovery job name allows concurrently running Generated recovery jobs.

Outfile-prefix for the output file prefix for all the generated outputs.

Specify Y to submit the recovery jobs after the tablespaces have been identified needed to be recovery.

Specify optional track_table_name if you want db2i2 to insert job tracking steps with DB2I2LOG command.

**P000710** takes the output from DB2 REPORT RECOVERY and generates TS line object, which represents all the table spaces, which have open for update since the specified RBA point.
To invoke P000710-Report Recovery Analysis Routine, you need to specify a DD with the following:

```
 //RPTRDD DD DSN=output.from.report.recovery
```

Where output.from.report.recovery contains the output from a DB2 REPORT RECOVERY output
Format:

**TSO P000710 output.TS.line.object RBA=xxxxxxxxxxxx**
or **TSO P000710 output.TS.line.object LRSN=xxxxxxxxxxxx**

Where
output.TS.line.object :
contains the output TS line object from P000710
RBA or LRSN=xxxxxxxxxxxx :
Specify the 12 byte HEX RBA point which is used to decide if a TS line will be generated. If sysibm.syslograngex contains a log range which after the specified 12 byte Hex, then a TS line object will be generated for the reported table space.

**JOBGEN** reads the input JCL and strip and replace all inline control parameters with information specified from control file.
Format:
**TSO JOBGEN '**JCL.input.dataset' 'control.dataset' [REP]
Where

'control.dataset' contains the following:

```
        1sst record   'SSID.dataset(SSID)'
                      used to  substitute the inline //SSID DD *
        2nd record  'Output.JCL.library'
                      used to receive the output JCL. JOBNAME is used as
                      the output JCL member name
        3rd record   'Output.parameter.library'
                      optional output parameter library. If specified, all the
                      //… DD *                        [$$memname]
                      //… DD DATA,DLM=xx              [$$memname]
        .             will be written to the library specified.
                      If optional [$$memname] specified, the specified
                      Memname will be used as the member of the output
                      Parameter. Otherwise, member C###### will be randomly
                      generated as the output member name.
     Example of a control dataset:
        'my.control(SSID)'
        'my.jcllib'
        'my.parmlib'
```

**TRANSFRM** reads input definition, map the input data file with output definition file to generate an output file which contains transformed output based on the input, output definition files and the input data file.
Format:

```
TSO TRANSFRM
IDEFDD=input.def.ddname|IDEFDSN=input.def.dsname             +
ODEFDD=output.def.ddname|ODEFDSN=output.def.dsname           +
DATADD=input.data.ddname|DATADSN=input.data.dsname           +
ODSN=transform,output.dsname                                 +
[COMMIT=(freq,dlm|;)] [LRECL=lrecl|80] [WKSP=1|pri_alloc]
[QUOTE][SAMPLE=#]
```

Where

'IDEFDD or IDEFDSN - input definition which can contains the following:

```
 varname    POS(position)  DATATYPE(length,precision) NULLIF(pos)='?'
Example,
      [WHEN(col1:col2)='??'] [WHEN(col1:col2)=X'????']
       CHAR1               POS(40)   CHAR(10)
       VARCHAR1            POS(115)  VARCHAR(254)
       SMALLINT1           POS(1)    SMALLINT
       INTERGER1           POS(3)    INTEGER
       DECIMAL1            POS(35)   DEC(7,2)
       DATE1               POS(774)  DATE
       TIME1               POS(785)  TIME
       TIMESTAMP1          POS(774)  TIMESTAMP  NULLIF(800)='?'
Note:  you can specify multiple WHEN clause inside input definition
       NULLIF(col1:col2)='??' or NULLIF(col1:col2)=X'????'
```

'ODEFDD or ODEFDSN - definition file used to format output file. Each input variable defined in the IDEFDSN can be used in the ODEFDSN with {varname}:

Example,

```
            [WHEN(col1:col2)='??'] [WHEN(col1:col2)=X'????']
            INSERT INTO MY_TABLE (
               CHAR1, VARCHAR1, SMALLINT1, INTERGER1, DECIMAL,
            DATE1, TIME1, TIMESTAMP1)
             VALUES(
              {CHAR1},
              {VARCHAR1},
              {SMALLINT1},
              {INTERGER1},
              {DECIMAL1},
              {DATE1},
              {TIME1},
              {TIMESTAMP1});
    Note:   you can specify multiple WHEN clause inside output definition
```

COMMIT(freq,dlm) can be used to insert COMMIT statement for each freq records, if the output records are in SQL format. Dlm if not specified default to a semicolon. LRECL is used to specify the LRECL of the output file. Default if not specified is 80. WKSP can be used to specify the output file primary allocation in cylinder. Default if not specified is 1 cylinder. QUOTE option generates single quote around CHAR, VARCHAR, DATE, TIME and TIMESTAMP data type except when the selected variable is a NULL. Use SAMPLE option to process only the first # input records.

**TO72** compress and remove unnecessary blanks from DB2I2 script line and convert them to 72 bytes long for DSNTAID and EXEC DB2I2 commands. The following lines will not be compressed:
DB2CMD line – DB2CMD on the first 6 position of the line
IDCAMS line – IDCAMS on the first 6 position of the line
A blank line
Format:
**TSO TO72 indsn outdsn dlm**

**TSSET** Generate table Space SET information in TS line object format from the selected TS line object.
Syntax: TSSET
Line objects allowed: DB, TS
**BO-MO**

**UCASE** Set Upper Case ON or OFF.
Syntax: UPDATE(ON|OFF)
Line objects allowed: N/A
**BO**

**UNLOAD** In DB2 V7 or above, generates UNLOAD utility JCL to unload from TS, TP, TB or image copy of TS or TP.
Specify FROM IMAGECOPY option allows unload from image copy. Use HLQ to specify High-level-qualifier for the selected Image Copy Dataset. You can not use this option with LISEDEF.
Specify ICGEN=gg and ICDATE=YYMMDD at end of the selected line object to specify the generation of image copy gg as the input to the UNLOAD, gg if specified, must be <= 0.
Current generation of image copy is selected if no ICGEN specified.
Specify ICDATE=YYMMDD to select a specific date of image copy as input to the UNLOAD.
Specify field specification and WHEN specification if desired.
Specify SYSREC and SYSPUNCH options to specify the SYSPUNCH and SYSREC dataset information. You can use this information to override the template specified in TEMPLATE command or default unload dataset name.
TEMPLATE command if required if you use LISTDEF to select your UNLOAD DB2 objects.

```
Syntax: UNLOAD     [[PARMUTIL=]'parmutil.dsn']
                   [LISTDEF=listdef.dsname[(patt*)]
                   [HLQ=ImageCopy-high-level-qualifier]
                   [TEMPLATE=template.dsname]
                   [OPTIONS=options.dsname]
```

Line objects allowed: TS, TP, TB, MT
TSC, TPC, TBC for V9 or above
**BO-MO-MT**

**UPDATE** Generate SQL UPDATE statements for specified line object. Use MAP option to generate embedded SQL. Use RUN option to generate UPDATE from RUN output. Use COMMIT=# to specify commit frequency. Use SQLTERM(?) to specify sql terminator. Use CHAR=HEX to generate CHAR or VARCHAR in HEX format.

```
Syntax: UPDATE [MAP='dclgen dsn' ]
               [RUN='db2i2.run.output' COMMIT=# SQLTERM(?)
                                         CHAR=HEX]
```

Line objects allowed: TB, AL, SY, VW, MT
TBC for V9 or above
**BO-MO-MT**

**USAUTH** Display User Authorization information for the selected line objects.
Syntax: USAUTH [GRANTOR|GRANTEE]
Line objects allowed: US
RO for V9 or above
**BO-MO-WC**

**VA** Generate Variable line objects from the selected line object.
Syntax: VA
Line objects allowed: PG, SP, FU,TR (for V11 or above )
**BO-MO-MT-WC**

**VAAUTH** Display Variable Authorization information for the selected Variable line objects.
Syntax: VAAUTH [GRANTOR|GRANTEE]
Line objects allowed: VA, US, RO (for V11+)
**BO-MO-WC**

**VIEWG** Display existing Global Variables. Default without option, display all global variables. Specify global-var-wo-& to display specific global variable. Specify global-var-wo-&% to display all global variables prefixed with global-var-wo-%.
Syntax: VIEWG [_| global-var-wo-& | global-var-wo-&%]
Line object allowed: N/A
**BO**

**VIRTUAL** Generates SQL INSERT for your DSN_VIRTUAL_INDEX table to simulate WHATIF condition for creating a new index or dropping an existing index. The information can then be evaluated with EXPLAIN to see the impact of the proposed changes. Use IX=ixcreator.ixname to populate the SLQ INSERT with the information clone from an existing index.
Syntax : VIRTUAL [IX=ixcreator.ixname]
Line objects allowed: N/A
**BO**

**VTOC** Use VTOC to invoke IBM IEHLIST LISTVTOC to list the VTOC information. Use SHORT option to list Empty Space information only. SHORT option can only be used with ODSN option.
Syntax : VTOC [ODSN=output.dsname [SHORT]]
Line objects allowed: DS
**BO**

**VW** Generate View line objects from the selected line object.
Syntax: VW
Line objects allowed: TB, VW, AL, SY, PL, PG, SP, FU,MT
TBC for V9 or above
**BO-MO-MT-WC**

**ZPARM** Display DSNZPARM information.
Syntax: ZPARM [dsnzparm-name]
**BO**

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## User Defined Function (UDF)

There are two types of UDF: system UDF and user UDF. System UDF located in the DB2I2 system library and shipped with DB2I2 system. A user UDF is created by you and stored in your own file. The following system user defined functions are shipped with the DB2I2 product to demonstrate how to build a user defined function. The UDF must be used with BACTH command and ICMD command option. The system UDF are located in the DB2I2.LIB library, you use BATCH ICMD=*udfname to invoke them. For example ICMD=*ACCCOMP to invoke plan_table comparison between two different generations of the same program: A user UDF is defined and save in your own file and invoked by BATCH ICMD=your.udf.file. Both types of UDF allows host variable substitute.

**ACCCOMP** provides scripts to compare different generations of program from the same DB2 PLAN_TABLE. The format to run ACCCOMP is:

```
 BATCH ICMD=*ACCCOMP &owner=xxxxxxxx &pg=xxxxxxxx
```

Where &owner is the owner name of plan_table
&pg is the program name

**ACCCOMPR** provides scripts to compare the current generation of program from the two different DB2 PLAN_TABLE from different locations. The format to run ACCCOMPR is:

```
BATCH ICMD=*ACCCOMPR &ownr1=xxxxxxxx &loc1=xxxxxxxx        +
                     &ownr2=xxxxxxxx &loc2=xxxxxxxx        +
                     &pg=xxxxxxxx
```

Where &ownr1 is the owner name of the first plan_table
&loc1 is the location name of the first plan_table
&ownr2 is the owner name of the 2nd plan_table
&loc2 is the location name of the 2nd plan_table
&pg is the program name

**GENURLD** Generates DSNTIAUL unload JCL followed by LOAD, REPAIR no copypending and RUNSTATS job steps.
Format:

```
BATCH ICMD=*GENURLD &JCLWS='build.jcl' ODSN=gen.jcl
```

Where
'gen.jcl' contains the output JCL to generate the build.jcl. You can keep this file and reuse it in the future.
'bulid.jcl' contains the output JCL after submit the 'gen.jcl'

**OBJCOMP** provides scripts to compare two different DB2 Objects. The format to run OBJCOMP is:

```
BATCH ICMD=*OBJCOMP &loc1=loc1 &loc=loc2 &objt=objt &obj=obj
```

Where &loc1 is the location name of the first object
&loc2 is the location name of the 2nd object
&to is the user id to be removed
&objt is object type DB, TS, TB or IX
&obj is the name of the object

**REMOVEID** provides scripts to help you to remove a user ID from your DB2 sub-system. The format to run REMOVEID is:

```
BATCH ICMD=*REMOVEID &from=xxxxxxxx &to=xxxxxxxx &suff=
```

Where &from is the user id to be removed
&to is the user id to be removed
&suff is the work file suffix which allows you to run multiple REMOVEID jobs concurrently

**TUNEPG** provides scripts to tune DB2 packages. The format to run TUNEPG is:

```
BATCH ICMD=*TUNEPG &OUTPUT=xxxxxxxx &TSOID=xxxxxxxx &suff=
```

Where &OUTPUT is the output file
&TSOID is your TSOID, must contain BIND authority
&suff is the work file suffix which allows you to run multiple TUNEPG jobs concurrently

**TUNETB** provides scripts to tune DB2 tables. The format to run TUNETB is:

```
BATCH ICMD=*TUNETB &OUTPUT=xxxxxxxx &TSOID=xxxxxxxx &suff=
```

Where &OUTPUT is the output file &TSOID is your TSOID, must contain BIND authority
&suff is the work file suffix which allows you to run multiple TUNETB jobs concurrently

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## Sample scripts

The following sample scripts can be invoked with BATCH ICMD=*name just like UDF. Except there are no host variable substitute:

**COPYSTAT** provides scripts to help you to copy catalog statistics from one location to another.

**COPYFTS, COPYFTS9, COPYFTSS** provides RXDB2I2 scripts to help you Build COPY jobs with Real Time Statistics

**COPYITS, COPYITS9, COPYITSS** provides RXDB2I2 scripts to help you Build Incremental COPY followed by Merge Copy jobs with Real Time Statistics

**DSCOPY2S, DSCOPY2** provides RXDB2I2 scripts to help you Build DSCOPY jobs. If there is an error because structure different, generate a temp TS and TB with DDL from Source TS and then DSCOPY from source to temp. Followed by a CURSOR LOAD from temp to Target

**DSCOPYBS, DSCOPYB** Same as DSCOPY2 and DSCOPY2S with BATCH interface.

**FTPMAIL, FTPMAILS** provides scripts to demonstrate how to use RXDB2I2 with FTP and MAIL. FTPMAILS is the scripts to invoke FTPMAIL.

**GENSCCMD** provides scripts to prepare and execute DSCOPY command.

**MIGRTB** provides scripts to help you to migrate DB2 tables.

**MONBUFR** provides scripts to capture DB2 Bufferpool information and report them.

**REORGIX, REORGIX9, REORGIXS** provides RXDB2I2 scripts to help you Build Online Reorg IP jobs with Real Time Stats

**REORGTS, REORGTS9, REORGTSS** provides RXDB2I2 scripts to help you Build Online Reorg TP jobs with Real Time Stats with Create and Drop Mapping table DDL.

**RUNSIX, RUNSIX9, RUNSIXS** provides RXDB2I2 scripts to help you Build Runstats IP jobs with Real Time Stats.

**RUNSTS, RUNSTS9, RUNSTSS** provides RXDB2I2 scripts to help you Build Runstats TP jobs with Real Time Stats.

**TRACK01, TRACK01S** provides scripts to demonstrate how to use RXDB2I2 with TRACK and MAIL. TRACK01S is the scripts to invoke TRACK01.

**TRACK02, TRACK02S** provides scripts to demonstrate how to use RXDB2I2 with TRACK and MAIL. TRACK02S is the scripts to invoke TRACK02.

**TRACK03, TRACK03S** provides scripts to demonstrate how to use RXDB2I2 with TRACK and MAIL together with INSERT to record job information in a db2 table. TRACK03S is the scripts to invoke TRACK02. (See DDLTRACK in ispflib for the RXDB2I2_TRACK db2 table definition)

**UNLDRELD** provides scripts to help you preparing UNLOAD and RELOAD processing.

## Sample User Defined Queries (UDQ)

The following sample user defined queries are shipped with the DB2I2 product to demonstrate how to build the user defined command with ICMD option. These commands are located in the DB2I2.LIB library, you use RUN IDSN=*udqname to invoke them. For example, use the following command generate AT line object for specified db.ts:
RUN IDSN=*GENAT &DB='dbname' &TS='tsname'

**GENAT** contains query to build AT line objects from a specified tablespace.
The format to run GENAT is:
RUN IDSN=*GENAT &DB='dbname' &TS='tsname'
&COMPRATIO=%compressed

**GENUNLDQ** contains query to build TB line objects to be used for DSNTIAUL. The format to run GENUNLDQ is:
RUN IDSN=*GENUNLDQ &WHEREWS='where.predicates.from.QBUILD'
Where
&WHERE contains the information from QBUILD output

**GENUNLD1** contains query to build TB line objects to be used for DSNTIAUL and UNLOAD with some enhancement.
The format to run GENUNLDQ is:

```
RUN IDSN=*GENUNLD1 &DEF=###
                   &DS=dataset-prefix
                   &WHERE='where.predicates.from.QBUILD'
Where
   &DEF     :default number of rows if no runstats information collected
   &DS      :dataset prefix for SYSREC and SYSPUNCH
   &WHERE   :contains the information from QBUILD output
```

**GENSC** contains query to build SC line objects to be used by DSCOPY command. The format to run GENSC is:

```
RUN IDSN=*GENSC  &FSSID=Source SSID
 &FLOC=Source LOCATION
 &TSSID=Target SSID
 &TLOC=Target LOCATION
 &RCVRIX- Specify &RCVRIX=RCVRIX=Y to generate REBUILD INDEX
         &RCVRIX=RCVRIX=N No REBUILD INDEX step
         &RCVRIX=      is the same as RCVRIX=Y
 &ICDATE- Specify &ICDATE=ICDATE=yymmdd to request specific
            date of image copy as input
         &ICDATE=      choose most current full image
                 copy as input
 &ICGEN - Specify &ICGEN=ICGEN=###     to request specific
            generation of image copy as input
            ### must be <= 0
         &ICGEN=       choose most current generation
                 of full image copy as input
&WHERE - Specify &WHERE='qbuild.where.predicate.dsname' to
           include the WHERE predicates generated
           from QBUILD command
```

**GENXC** contains query to build XC line objects to be used by DSCOPY command. The format to run GENXC is:

```
RUN IDSN=*GENSC  &FSSID=Source SSID
 &FLOC=Source LOCATION
 &TSSID=Target SSID
 &TLOC=Target LOCATION
&ICDATE- Specify &ICDATE=ICDATE=yymmdd to request specific
                 date of image copy as input
          &ICDATE=       choose most current full image
                     copy as input
 &ICGEN - Specify &ICGEN=ICGEN=###      to request specific
                 generation of image copy as input
                 ### must be <= 0
          &ICGEN=        choose most current generation
                     of full image copy as input
&WHERE - Specify &WHERE='qbuild.where.predicate.dsname' to
                include the WHERE predicates generated
                from QBUILD command
```

**OBIDQ** contains query to build DB, TS, TB lines in obid sequence to be used for DB MIGR with OBID option:

```
RUN IDSN=*OBIDQ &DB='dbname'
```

**VCAT2SGQ** contains query to generate STOP, ALTER and START to convert TP and IP from VCAT to STOGROUP. The format to run VCAT2SGQ is:

```
RUN IDSN=*VCAT2SGQ LIMIT(9999) T=N
 &DB=Database criteria
 &SG=Storage-Group-Name
```

## Sample ED macros

The following sample ED macros are shipped with the DB2I2 product to demonstrate how to build ED macros. These commands are located in the DB2I2.LIB library, you use FGET *macronm to copy them into your edit session and make change and create your own copy.

**TPTOSQL** demonstrates how to use various ED command to translate TP line objects to DELETE and INSERT sql to update COPY_SEQ_TABLE. The COPY_SEQ_TABLE contains the of image copy backup to the same job.

**POTRCVR** demonstrates how to use various ED command to process smart point of time (to last QUIESCE point) recovery for a DB line object.

**POTRCVRD** demonstrates how to use various ED command to process smart point of time (to last QUIESCE point) recovery for a DB line object (DASD image copy with one recovery for all line objects).

**POTRCVRT** a modified version of POTRCVR used to demonstrates how to use various ED command to process smart point of time (to last QUIESCE point) recovery for a DB line object, with consideration of image copies are backuping to TAPE and backup sequence.

**INSSKEL, DELSKEL, DDLCOPYS** are INSERT sql skeleton, DELETE sql skeleton and COPY_SEQ_TABLE DDL, which are required for the PORTRCVRT macro.

**VCAT2SGM** a ED macro to remove the first 25 bytes from the output of VCAT2SGQ run.

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## Real Time Statistics Related Queries V8+

**COPYFIX[9][S]** contains query to build IP lines for all indexes which requires a Full Image Copy against Real Time Statistics. The criteria are the same as DSNACCOR. The format to run COPYFIX is:

```
RUN IDSN=*COPYFIX LIMIT(9999) T=N
      &IXSTTB=SYSINDEXSPACESTATS or INDEXSPACESTATS
      &DB=dbname
      &XCRDAYSNCLASTCOPY=7
      &XCRINDEXSIZE=50
      &XCRUPDATEDPAGESPCT=20
      &XCRCHANGESPCT=10
```

**COPYFTS[9][S]** contains query to build TP lines for all table spaces which requires a Full Image Copy against Real Time Statistics. The criteria are the same as DSNACCOR. The format to run COPYFTS is:

```
RUN IDSN=*COPYFTS LIMIT(9999) T=N
      &TSSTTB=SYSTABLESPACESTATS or TABLESPACESTATS
      &DB=dbname
      &SCRDAYSNCLASTCOPY=07
      &SCRUPDATEDPAGESPCT=20
      &SCRCHANGESPCT=10
```

**COPYITS[9][S]** contains query to build TP lines for all table spaces which requires an Incremental Image Copy against Real Time Statistics. The criteria are the same as DSNACCOR. The format to run COPYITS is:

```
RUN IDSN=*COPYITS LIMIT(9999) T=N
      &TSSTTB=SYSTABLESPACESTATS or TABLESPACESTATS
      &DB=dbname
      &ICRUPDATEDPAGESPCT=1
      &ICRCHANGESPCT=1
```

**REORGIX[9][S]** contains query to build IP lines for all table spaces which requires a REORG against Real Time Statistics. The criteria are the same as DSNACCOR. The format to run REORGIX is:

```
RUN IDSN=*REORGIX LIMIT(9999) T=N
      &IXSTTB=SYSINDEXSPACESTATS or INDEXSPACESTATS
      &DB=dbname
      &RRIINSERTDELETEPCT=20
      &RRIAPENDINSERTPCT=10
      &RRIPSEUDODELETEPCT=10
      &RRIMASSDELETELIMIT=0
      &RRILEAFLIMIT=10
      &RRINUMLEVELS=0
      &EXTENTLIMIT=50
```

**REORGTS[9][S]** contains query to build TP lines for all table spaces which requires a REORG against Real Time Statistics. The criteria are the same as DSNACCOR. The format to run REORGTS is:

```
RUN IDSN=*REORGTS LIMIT(9999) T=N
      &TSSTTB=SYSTABLESPACESTATS or TABLESPACESTATS
      &DB=dbname
      &RRTINSDELUPDPCT=20
      &RRTUNCLUSTINSPCT=10
      &RRTDISORGLOBPCT=10
      &RRTINDREFLIMIT=10
      &RRTMASSDELLIMIT=0
      &EXTENTLIMIT=50
```

**RUNSIX[9][S]** contains query to build IP lines for all table spaces which requires a RUNSTATS against Real Time Statistics. The criteria are the same as DSNACCOR. The format to run RUNSIX is:

```
RUN IDSN=*RUNSIX LIMIT(9999) T=N
      &IXSTTB=SYSINDEXSPACESTATS or INDEXSPACESTATS
      &DB=dbname
      &SRIINSDELUPDPCT=20
      &SRIINSDELABS=0
      &SRIMASSDELETELIMIT=0
```

**RUNSTS[9][S]** contains query to build TP lines for all table spaces which requires a RUNSTATS against Real Time Statistics. The criteria are the same as DSNACCOR. The format to run REORGTS is:

```
RUN IDSN=*RUNSTS LIMIT(9999) T=N
      &TSSTTB=SYSTABLESPACESTATS or TABLESPACESTATS
      &DB=dbname
      &SRTINSDELUPDPCT=20
      &SRTINSDELUPDABS=0
      &SRTMASSDELETELIMIT=0
```

*** All source are in Ispflib [S] is the source Rxdb2i2 script to invoke the real time statistics queries.**

**Date Published 05/22/2014**

# Line Object to Command Reference

| Line Object | Available DB2I2 Commands | | |
|---|---|---|---|
| AC | TAG | | |
| AI | QBUILD | SPACEADJ | |
| AL | AUTH | COAUTH | CREATE |
| | CURSORD | DrillDown | DCLGEN |
| | DDL | DELETE | DSNTIAUL |
| | FETCH | GRANT | IMPACT |
| | INSERT | MIGR | MT |
| | PG | PL | QBUILD |
| | REVOKE | SELECT | TB |
| | TBAUTH | UPDATE | VW |
| AR | HMIGRATE | HRECALL | TAG |
| AT | QBUILD | SPACEADJ | |
| BP | AUTH | DISPLAY | GRANT |
| | QBUILD | REVOKE | RSAUTH |
| CI | SELPATHU | | |
| CL | AUTH | GRANT | QBUILD |
| | REVOKE | RSAUTH | |
| CO | ALTER | drilldown | QBUILD |
| | PG | STATS | |
| CP | TAG | | |
| CU | SELPATHU | | |
| DB | ALTER | AUTH | CREATE |
| | DrillDown | DBAUTH | DBDSIZE |
| | DDL | GRANT | IMPACT |
| | IP | IS | ISP |
| | IX | LISTDEF | MIGR |
| | MT | OI | PG |
| | PL | PG | QBUILD |
| | REPAIR | REVOKE | RI |
| | STATS | TB | TP |
| | TR | TS | TSSET |
| | *TSC* | *TPC* | *TBC* |
| | *IPC* | *ISC* | *ISPC* |
| | *IXC* | | |
| DM | DrillDown | PACKIT | QBUILD |
| | TOKENSCN | | |
| DS | GENVCAT | MIGRATE | HRECALL |
| | LISTC | QBUILD | TSIX |
| | VTOC | | |
| *DT* | AUTH | CREATE | Drilldown |
| | DDL | GRANT | MIGR |
| | QBUILD | REVOKE | RSAUTH |
| | TB | | |
| *FU* | AUTH | CREATE | Drilldown |
| | DDL | GRANT | IMPACT |
| | MIGR | PG | PL |
| | QBUILD | REVOKE | RTAUTH |
| | SQ | TB | VW |
| | VA | | |
| GV | SETG | | |
| IC | QBUILD | STATS | |
| IP | CHECK | CPY2CPY | COPY |
| | DB | DrillDown | DISPLAY |
| | DSADJ | DSN1COPY | DSN1LOGP |
| | DSN1PRNT | GENVCAT | IS |
| | ISP | IX | LISTC |
| | MT | LISTDEF | QBUILD |
| | RBA | REBUILD | RECOVER |
| | REORG | REORGCHK | REPAIR |
| | REPORT | RUNSTATS | SNAPSHOT |
| | START | STOP | TB |
| | TP | TS | |
| | *TSC* | *TPC* | *TBC* |
| | *IXC* | *ISC* | *ISPC* |
| *IPC* | *CHECK* | *CPY2CPY* | *COPY* |
| | *DB* | *DrillDown* | *DISPLAY* |
| | *DSADJ* | *DSN1COPY* | *DSN1LOGP* |
| | *DSN1PRNT* | *GENVCAT* | *IS* |
| | *ISP* | *IX* | *LISTC* |
| | *MT* | *LISTDEF* | *QBUILD* |
| | *RBA* | *REBUILD* | *RECOVER* |
| | *REORG* | *REORGCHK* | *REPAIR* |
| | *REPORT* | *RUNSTATS* | *SNAPSHOT* |
| | *START* | *STOP* | *TB* |
| | *TP* | *TS* | |
| | *TSC* | *TPC* | *TBC* |
| | *IXC* | *ISC* | *ISPC* |
| IS | CPY2CPY | COPY | DB |
| | DrillDown | DISPLAY | DSN1COPY |
| | DSN1LOGP | DSN1PRNT | GENVCAT |
| | IP | ISP | IX |
| | LISTC | MT | LISTDEF |
| | QBUILD | RBA | REBUILD |
| | RECOVER | REORG | REORGCHK |
| | REPAIR | REPORT | SNAPSHOT |
| | START | STOP | TB |
| | TP | TS | |
| | *IPC* | *ISPC* | *IXC* |
| | *TBC* | *TPC* | *TSC* |
| *ISC* | *CPY2CPY* | *COPY* | *DB* |
| | *DrillDown* | *DISPLAY* | *DSN1COPY* |
| | *DSN1LOGP* | *DSN1PRNT* | *GENVCAT* |
| | *IP* | *ISP* | *IX* |
| | *LISTC* | *MT* | *LISTDEF* |
| | *QBUILD* | *RBA* | *REBUILD* |
| | *RECOVER* | *REORG* | *REORGCHK* |
| | *REPAIR* | *REPORT* | *SNAPSHOT* |
| | *START* | *STOP* | *TB* |
| | *TP* | *TS* | |
| | *IPC* | *ISPC* | *IXC* |
| | *TBC* | *TPC* | *TSC* |
| ISP | CPY2CPY | COPY | DB |
| | DrillDown | DISPLAY | DSADJ |
| | DSN1COPY | DSN1LOGP | DSN1PRNT |
| | GENVCAT | IP | IS |
| | IX | LISTC | MT |
| | LISTDEF | QBUILD | RBA |
| | REBUILD | RECOVER | REORG |
| | REORGCHK | REPAIR | REPORT |
| | SNAPSHOT | START | STATS |
| | STOP | TB | TP |
| | TS | | |
| | *IPC* | *ISC* | *IXC* |
| | *TBC* | *TPC* | *TSC* |
| *ISPC* | *CPY2CPY* | *COPY* | *DB* |
| | *DrillDown* | *DISPLAY* | *DSADJ* |
| | *DSN1COPY* | *DSN1LOGP* | *DSN1PRNT* |
| | *GENVCAT* | *IP* | *IS* |
| | *IX* | *LISTC* | *MT* |
| | *LISTDEF* | *QBUILD* | *RBA* |
| | *REBUILD* | *RECOVER* | *REORG* |
| | *REORGCHK* | *REPAIR* | *REPORT* |
| | *SNAPSHOT* | *START* | *STATS* |
| | *STOP* | *TB* | *TP* |
| | *TS* | | |
| | *IPC* | *ISC* | *IXC* |
| | *TBC* | *TPC* | *TSC* |
| IX | ALTER | CHECK | CPY2CPY |
| | COPY | CREATE | DrillDown |
| | DB | DDL | DISPLAY |
| | DSN1COPY | DSN1LOGP | DSN1PRNT |
| | GENVCAT | IMPACT | IP |
| | IS | ISP | LISTC |
| | LISTDEF | MIGR | MT |
| | PG | PL | QBUILD |
| | RBA | *REBUILD* | RECOVER |
| | REORG | REPORT | REORGCHK |
| | REPAIR | RUNSTATS | SNAPSHOT |
| | SPACE | START | STATS |
| | STOP | TB | TP |
| | TS | | |
| | *IPC* | *ISC* | *ISPC* |
| | *TBC* | *TPC* | *TSC* |
| *IXC* | *ALTER* | *CHECK* | *CPY2CPY* |
| | *COPY* | *CREATE* | *DrillDown* |
| | *DB* | *DDL* | *DISPLAY* |
| | *DSN1COPY* | *DSN1LOGP* | *DSN1PRNT* |
| | *GENVCAT* | *IMPACT* | *IP* |
| | *IS* | *ISP* | *LISTC* |
| | *LISTDEF* | *MIGR* | *MT* |
| | *PG* | *PL* | *QBUILD* |
| | *RBA* | *REBUILD* | *RECOVER* |
| | *REORG* | *REPORT* | *REORGCHK* |
| | *REPAIR* | *RUNSTATS* | *SNAPSHOT* |
| | *SPACE* | *START* | *STATS* |
| | *STOP* | *TB* | *TP* |
| | *TS* | | |

| | | | |
|---|---|---|---|
| | *IPC* | *ISC* | *ISPC* |
| | *TBC* | *TPC* | *TSC* |
| **JI** | SDSF | | |
| **MS** | ALTER | CREATE | DDL |
| | Drilldown | MIGR | |
| **MT** | AL | AUTH | COAUTH |
| | CREATE | CURSORD | DrillDown |
| | DB | DCLGEN | DDL |
| | DELETE | DSNTIAUL | FETCH |
| | FU | GRANT | IMPACT |
| | INSERT | IP | IS |
| | ISP | IX | MIGR |
| | MT | PG | PL |
| | QBUILD | REVOKE | SELECT |
| | SP | SY | TB |
| | TBAUTH | TP | TS |
| | ULOAD | UPDATE | VW |
| **OI** | Drilldown | | |
| **PGD** | BIND DEPLOY | | |
| **PG** | AL | AUTH | BIND |
| | BIND COPY | DrillDown | FREE |
| | FU | GRANT | IX |
| | MT | PGAUTH | PL |
| | QBUILD | REBIND | REVOKE |
| | SP | SQ | SY |
| | TB | TOKENSCN | TR |
| | TS | VA | VW |
| | ***EXPLORE*** | | |
| **PM** | ALTER | CREATE | DDL |
| | Drilldown | MIGR | |
| **PL** | AL | AUTH | BIND |
| | DrillDown | FREE | FU |
| | GRANT | IX | PACKIT |
| | MT | PG | PLAUTH |
| | QBUILD | REBIND | REVOKE |
| | SP | SQ | SY |
| | TB | TS | VW |
| **RI** | DrillDown | DDL | MIGR |
| | QBUILD | | |
| **RL** | TAG | | |
| ***RO*** | *AUTH* | *COAUTH* | *COPYAUTH* |
| | *CREATE* | *DBAUTH* | *DrillDown* |
| | *GRANT* | *PGAUTH* | *PLAUTH* |
| | *QBUILD* | *REVOKE* | *RSAUTH* |
| | *RTAUTH* | *SHAUTH* | *SQAUTH* |
| | *TBAUTH* | *TRAUTH* | *USAUTH* |
| **SC** | DSCOPY | QBUILD | |
| **SG** | ALTER | AUTH | CREATE |
| | DrillDown | DDL | GRANT |
| | MIGR | QBUILD | REVOKE |
| | RSAUTH | STOSPCE | |
| ***SH*** | DrillDown | AUTH | GRANT |
| | QBUILD | REVOKE | SHAUTH |
| ***SP*** | AUTH | CREATE | Drilldown |
| | DDL | GRANT | IMPACT |
| | MIGR | PG | PL |
| | QBUILD | REVOKE | RTAUTH |
| | VA | | |
| ***SQ*** | AUTH | CREATE | Drilldown |
| | DDL | GRANT | IMPACT |
| | MIGR | PG | PL |
| | QBUILD | REVOKE | SQAUTH |
| **SY** | CREATE | CURSORD | DrillDown |
| | DCLGEN | DDL | DELETE |
| | DSNTIAUL | FETCH | IMPACT |
| | INSERT | MIGR | MT |
| | PG | PL | QBUILD |
| | SELECT | TB | UPDATE |
| | VW | | |
| **TB** | AL | ALTER | AUTH |
| | COAUTH | CREATE | CURSORD |
| | DrillDown | DB | DCLGEN |
| | DDL | DELETE | DSNTIAUL |
| | DT | FETCH | FU |
| | GRANT | IMPACT | INSERT |
| | IP | IS | ISP |
| | IX | LISTDEF | LOAD |
| | MIGR | MT | OI |
| | PG | PL | QBUILD |
| | REVOKE | RI | SELECT |
| | SELPATHV | SP | SPACE |
| | STATS | SY | TBAUTH |
| | TP | TR | TS |
| | UNLOAD | UPDATE | VW |
| | *TSC* | *TPC* | *IXC* |
| | *IPC* | *ISC* | *ISPC* |
| ***TBC*** | *AL* | *ALTER* | *AUTH* |
| | *COAUTH* | *CREATE* | *CURSORD* |
| | *DrillDown* | *DB* | *DCLGEN* |
| | *DDL* | *DELETE* | *DSNTIAUL* |
| | *DT* | *FETCH* | *FU* |
| | *GRANT* | *IMPACT* | *INSERT* |
| | *IP* | *IS* | *ISP* |
| | *IX* | *LISTDEF* | *LOAD* |
| | *MIGR* | *MT* | *OI* |
| | *PG* | *PL* | *QBUILD* |
| | *REVOKE* | *RI* | *SELECT* |
| | *SELPATHV* | *SP* | *SPACE* |
| | *STATS* | *SY* | *TBAUTH* |
| | *TP* | *TR* | *TS* |
| | *UNLOAD* | *UPDATE* | *VW* |
| | *TSC* | *TPC* | *IXC* |
| | *IPC* | *ISC* | *ISPC* |
| ***TC*** | *CREATE* | *DrillDown* | *DDL* |
| | *MIGR* | | |
| **TP** | CHECK | COPY | CPY2CPY |
| | DrillDown | DB | DISPLAY |
| | DSADJ | DSN1COPY | DSN1LOGP |
| | DSN1PRNT | GENVCAT | IP |
| | IS | ISP | LISTC |
| | LISTDEF | MODIFY | MT |
| | QBUILD | QUIESCE | RBA |
| | RECOVER | REORG | REORGCHK |
| | REPAIR | REPORT | RUNSTATS |
| | SNAPSHOT | START | STOP |
| | STATS | TB | UNLOAD |
| | *IPC* | *ISC* | *ISPC* |
| | *TBC* | *TSC* | |
| ***TPC*** | *CHECK* | *COPY* | *CPY2CPY* |
| | *DrillDown* | *DB* | *DISPLAY* |
| | *DSADJ* | *DSN1COPY* | *DSN1LOGP* |
| | *DSN1PRNT* | *GENVCAT* | *IP* |
| | *IS* | *ISP* | *LISTC* |
| | *LISTDEF* | *MODIFY* | *MT* |
| | *QBUILD* | *QUIESCE* | *RBA* |
| | *RECOVER* | *REORG* | *REORGCHK* |
| | *REPAIR* | *REPORT* | *RUNSTATS* |
| | *SNAPSHOT* | *START* | *STOP* |
| | *STATS* | *TB* | *UNLOAD* |
| | *IPC* | *ISC* | *ISPC* |
| | *TBC* | *TSC* | |
| ***TR*** | AUTH | CREATE | Drilldown |
| | DDL | IMPACT | MIGR |
| | PG | QBUILD | TB |
| | TRAUTH | VA | |
| **TS** | ALTER | AUTH | CHECK |
| | COPY | CPY2CPY | CREATE |
| | DrillDown | DB | DDL |
| | DISPLAY | DSN1COPY | DSN1LOGP |
| | DSN1PRNT | GENVCAT | GRANT |
| | IMPACT | IP | IS |
| | ISP | IX | LISTC |
| | LISTDEF | MIGR | MT |
| | MODIFY | OI | PG |
| | PL | QBUILD | QUIESCE |
| | RBA | RECOVER | REORG |
| | REORGCHK | REPAIR | REPORT |
| | REVOKE | RSAUTH | RUNSTATS |
| | SNAPSHOT | START | STATS |
| | STOP | TB | TP |
| | TSSET | UNLOAD | |
| | *IPC* | *ISC* | *ISPC* |
| | *IXC* | *TBC* | *TPC* |
| ***TSC*** | *ALTER* | *AUTH* | *CHECK* |
| | *COPY* | *CPY2CPY* | *CREATE* |
| | *DrillDown* | *DB* | *DDL* |
| | *DISPLAY* | *DSN1COPY* | *DSN1LOGP* |
| | *DSN1PRNT* | *GENVCAT* | *GRANT* |
| | *IMPACT* | *IP* | *IS* |
| | *ISP* | *IX* | *LISTC* |
| | *LISTDEF* | *MIGR* | *MT* |
| | *MODIFY* | *OI* | *PG* |
| | *PL* | *QBUILD* | *QUIESCE* |

| | | | |
|---|---|---|---|
| | *RBA* | *RECOVER* | *REORG* |
| | *REORGCHK* | *REPAIR* | *REPORT* |
| | *REVOKE* | *RSAUTH* | *RUNSTATS* |
| | *SNAPSHOT* | *START* | *STATS* |
| | *STOP* | *TB* | *TP* |
| | *TSSET* | *UNLOAD* | |
| | *IPC* | *ISC* | *ISPC* |
| | *IXC* | *TBC* | *TPC* |
| **US** | AUTH | COAUTH | COPYAUTH |
| | DBAUTH | GRANT | PGAUTH |
| | PLAUTH | QBUILD | REVOKE |
| | RSAUTH | RTAUTH | SHAUTH |
| | SQAUTH | TBAUTH | TRAUTH |
| | USAUTH | | |
| **VL** | QBUILD | | |
| **VA** | AUTH | CREATE | DDL |
| | DEPEND | DRILLDWN | FU |
| | GRANT | MIGR | PG |
| | REVOKE | SP | TR |
| | VAAUTH | | |
| **VW** | AL | AUTH | COAUTH |
| | CREATE | CURSORD | DrillDown |
| | DCLGEN | DDL | DELETE |
| | DSNTIAUL | FETCH | FU |
| | GRANT | IMPACT | INSERT |
| | MIGR | MT | PG |
| | PL | QBUILD | REVOKE |
| | SELECT | SP | SY |
| | TB | TBAUTH | UPDATE |
| | VW | | |
| **XC** | DSCOPY | QBUILD | |

***EXPLORE*** *is a Price add-on feature for JRH DB2I2*