

IBM UTILITIES IN DB2 12



(This article is part of our [Db2 Guide](#). Use the right-hand menu to navigate.)

BACKUP SYSTEM

```
. -FULL-----
>>-BACKUP SYSTEM--+-----+-----+-----+-----+----->
      '-DATA ONLY-'  +-ESTABLISH INCREMENTAL-+
                        '-END INCREMENTAL-----'

>+-----+-----+-----+-----+-----+-----+----->
  +--ALTERNATE_CP (copy-pool)--+-----+-----+-----+-----+
                                     '-DBBSG(stogroup)-'  '-LGBSG(stogroup-'
>+-----+-----+-----+-----+-----+-----+-----><
+--FORCE-----+-----+-----+-----+-----+-----+-----+
-----+-----+-----+-----+-----+-----+-----+-----+
FORCE-' | '-DUMPNONLY--+-----+-----+-----+-----+-----+-----+
TOKEN- (X'byte-string')' '- dumpclass-spec -' dumpclass-spec: >--DUMPCCLASS-(-
-dc1---)-----< |-dc2-|
                |-dc3-|
                |-dc4-|
                |-dc5-|
```



```

' -DELETE--YES--+-----+- '
    ' -LOG--NO-- '
.-ERRDNN--SYSERR-.
>+-----+----->
' -ERRDNN--ddname-'
.-WORKDDN--SYSUT1-- , --SYSUT2----- .
>+-----+----->
' -WORKDDN--+--ddname1-- , --ddname2----+- '
    |                  . , --SYSUT2- . |
    +--ddname1--+-----+--+
    | .-SYSUT1- .                |
    '+-----+-- , --ddname2-'
>+-----+-----+-----+----->
| .-SYSPUNCH- . | ' -SORTDEVT--device-type-'
' -PUNCHDDN--+--ddname----+- '
>+-----+----->>
' -SORTNUM--integer-'

```

CHECK INDEX

```

>>-CHECK--INDEX----->
>+--LIST--listdef-name-----+-->
+-(-index-name+-----+-)------+
|                ' -PART-integer-'                |
' -(ALL)-TABLESPACE+-----+--table-space-name+-----+-- '
                  ' -database-name.-'                ' -PART-integer'
                  .-SHRLEVEL--REFERENCE-.
>+-----+----->
' -CLONE-'  ' -SHRLEVEL--CHANGE---- '
.-DRAIN_WAIT--IRLMRWT value-. .-RETRY--UTIMOUT value-.
>+-----+-----+-----+----->
' -DRAIN_WAIT--integer----- '  ' -RETRY--integer----- '
                               .-WORKDDN--SYSUT1-.
>+-----+-----+-----+----->
' -RETRY_DELAY--integer-'  ' -WORKDDN--ddname-'
>+-----+-----+-----+----->
' -SORTDEVT--device-type-'  ' -SORTNUM--integer-'
>+-----+----->>
' -PARALLEL--num-subtasks-'

```

CHECK LOB

```

                              .-SHRLEVEL--REFERENCE-.
>>-CHECK--LOB--lob-table-space-spec+-----+----->

```

```

                '-SHRLEVEL--CHANGE----'
                .-EXCEPTIONS--0-----,
>--drain-spec--+-----+-----+-----+-----+-----+-----+-----+----->
                '-EXCEPTIONS--integer-'
>--+-----+-----+-----+-----+-----+-----+-----+----->
    |               .-SYSPUNCH-. | '-SORTDEVT--device-type-'
    '-PUNCHDDN--+ddname----+'
>--+-----+-----+-----+-----+-----+-----+-----+----->
    '-SORTNUM--integer-'

```

Lob-table-space-spec:

```

>-TABLESPACE+-----+lob-table-space-name+-----+-----+-----+----->
                '-database-name-'                          '-CLONE-'

```

drain-spec:

```

    .-DRAIN_WAIT--IRLMRWT value-. .-RETRY--UTIMOUT value-.
>--+-----+-----+-----+-----+-----+-----+-----+----->
+>
    '-DRAIN_WAIT--integer-----' '-RETRY--integer-----' '-RETRY_DELAY-int-'

```

COPY

```

                .-FULL--YES-----,
>>+--LIST--listdef-name--| data-set-spec |--+-----+-----+-----+----->
-----+-----+----->
    |                                               +-FULL--NO-----+
    |                                               '-| changelimit-spec |-'
    |
    | .-----+-----+-----+-----+-----+-----+-----+-----
-----+-----+
    | V               .-FULL--YES-----, .DSNUM--ALL-----,
    |
    | '---+table-space-spec+--+-----+-----+-----+-----+-----+-----+
+--data-set-spec+-'
    | '-index-name-spec-' +-FULL--NO-----+ |                               |
    |                       '-| changelimit-spec |-' '-DSNUM--integer-----'
>--+-----+-----+-----+-----+-----+-----+-----+----->
->
    '-PARALLEL+-----+-----+-----+-----+-----+-----+-----+----->
    '-(num-objects)-' '-TAPEUNITS--(--num-tape-units--)-'

```



```
'-creator-id.-'
```

```
From-copy-spec:
```

```
.-FROMLASTCOPY-----  
>>+-----+----->>  
+-FROMLASTFULLCOPY-----+ +  
FROMLASTINCRCOPY-----+ +  
FROMLASTFLASHCOPY-----+ '-  
FROMCOPY-----dsn--+-----+ '- '  
FROMVOLUME--+CATALOG-----+ '- ' -volser--+-----+ '- '  
FROMSEQNO--n-' Data-set-spec >>+ COPYDDN(+ddname1-----+--+)-+  
-----+--+>< | |  
'-,ddname-' | '-RECOVERYDDN(+ddname3-----+--+)-' |  
| '-,ddname2-----' | '-  
,ddname4-' | |  
| | '-,ddname4-----  
-----' |  
'-RECOVERYDDN(-|ddname3-----+--+)------  
-----'  
| '-,ddname4-' |  
'-ddname4-----'
```

DIAGNOSE

```
>>-DIAGNOSE--+diagnose statement+-----  
->< '-END-----' Diagnose-statement: >>+-----+-----  
----->  
| .-,-----|  
| V | |  
'-TYPE(---integer-+-)-'  
>+-----+-----  
->  
'-ALLDUMPS+-----+-'  
| .-,-----|  
| V | |  
'-(---X'abend-code'-+-)-'  
>+-----+-----  
->  
'-NODUMPS+-----+-'  
| .-,-----|  
| V | |  
'-(---X'abend-code'-+-)-'  
>+-----+-----+-----+-----+-----  
->< '-display statement-' '-wait statement-' '-abend statement-' Display-
```

```

statement: >>-DISPLAY-----
----->
>>+-OBD+-----+table-space-name+-----+-----+-----+
->< | '-database-name.-' +-ALL-----+ '-CLONE-' | | +-TABLES--+ | | '-
INDEXES-' | +-SYSUTIL-----
---+ +-MEPL-----+ +
AVAILABLE-----+ '-DBET+
DATABASE--database-name-----+-----+-----+ '-TABLESPACE+
-----+table-space-name+ '-CLONE-' | '-database-name.-' | '-INDEX--
index-name-----' Wait-statement: .-----
-----, V | >>-WAIT----+MESSAGE--message-id--+
-----+-----+----->< | '-INSTANCE--integer-' | '-
TRACEID--+X'trace-id'+-----+-----+ '-integer-----' '-INSTANCE-
-integer-' Abend-statement: >>-ABEND--+MESSAGE--message-id--+
-----+-----+----->< | '-INSTANCE--integer-'
| '-NODUMP-'
      '-TRACEID--+X'trace-id'+-----+-----+
          '-integer-----' '-INSTANCE--integer-'

```

EXEC SQL

```

>>-EXEC--SQL--+declare-cursor-spec-----+--ENDEXEC-----
->< '-non-select dynamic SQL statement-' Declare-cursor-spec: >>-DECLARE--
cursor-name--CURSOR--FOR--select-statement-----><

```

LISTDEF

```

          .-----,
          V           |
>>-LISTDEF--list-name-----list-options-----
->

```

List-options:

```

>+INCLUDE+-----+LIST-ref-list+-----+-----+
+>
  'EXCLUDE' |           | '-init-obj-spec-' 'CLONED--+YES--+''-RI-' +-ALL--+
           '-type-spec-'           '-NO--'           +-BASE+
                                           +-LOB+
                                           '-XML-'

```

```

      .-DEFINED YES-.
>+-----+-----+-----+
->
      +-DEFINED NO--+ +-HISTORY+
      '-DEFINED ALL-' '-ARCHIVE-'
>+-----+-----+-----+

```

```

->< '-BASIC--+-NO--+-' '-EXTENDED--+-NO--+-' '-YES-' '-YES-' Init-obj-spec
>>-+DATABASE--database-name+--+-----+-----
->< +-table-space-spec-----+ '-PARTLEVEL--+------+' +-index-space-spec----
-----+ '(n)-' +-table-spec-----+ +-index-spec-----+ Table-
space-spec: TABLESPACE--+------+--table-space-name-----
----->< '-database-name.-' Index-space-spec: >>-INDEXSPACE--+------
-----+-index-space-name----->< '-database-name.-'
Table-spec: >>-TABLE--+------+--table-name-----
----->< '-creator-id.-' Index-space: >>-INDEX--+------+--index-
name----->< '-creator-id.-'

```

LOAD

```

        .-DATA-.      .-INDDN--SYSREC----- .
>>-LOAD--+------+--+-----+--+-----+----->
                +-INDDN--ddname-----+ '-PREFORMAT-'
                +-INCURSOR--cursor-name+

                                .-PRESORTED--NO-- .
>+-----+-----+-----+-----+----->
|           .-1----- . | '-PRESORTED--YES-'
'-COPYDICTIONARY--+-integer+-'

>+-----+-----+-----+-----+----->
'-PARALLEL--+------+' '-ROWFORMAT--+-BRF--+'
                '-(num-subtasks)-'                '-RRF-'

>+-----+-----+-----+-----+----->
'-RBALRSN_CONVERSION--+-NONE-----+'
                +-BASIC-----+
                '-EXTENDED-'

>--| flashcopy-spec |--+------+--+-----+----->
                '-KEEPDICTIONARY-' '-REUSE-'

        .-LOG--YES----- .
>+-----+-----+-----+-----+----->
'-LOG--NO--+------+'
                '-NOCOPYPEND-'

                (1)

        .-SORTKEYS--0----- .                .-FLOAT(S390)- .
>+-----+-----+-----+-----+----->
+-SORTKEYS--NO-----+                '-FLOAT(IEEE)-'
'-SORTKEYS--integer-'

```



```

.-EBCDIC-.
>--+-----+--+-----+--+-----+--+-----+----->
+-ASCII---+ |          ,---,-----, | '-NOSUBS-'
'-UNICODE-' |          V          | |
          '-CCSID(---integer+-)-'

.-ENFORCE-CONSTRAINTS-. .-ERRDDN--SYSERR-.
>--+-----+--+-----+--+-----+----->
'-ENFORCE--NO-----' '-ERRDDN--ddname-'

.-MAPDDN--SYSMAP-. .-DISCARD--SYSDISC-.
>--+-----+--+-----+--+-----+----->
'-MAPDDN--ddname-' '-DISCARD--ddname--'

.-DISCARDS--0-----,
>--+-----+--+-----+--+-----+----->
'-DISCARDS--integer-' '-SORTDEVT--device-type-'

>--+-----+--+-----+--+-----+----->
'-SORTNUM--integer-'

>--+-----+--+-----+--+-----+----->
'-CONTINUEIF(start+-----+)=--X'byte-string'-----+-'
          '-:end-'      '-'character-string'-'

>--+-----+--+-----+--+-----+----->
'-IGNORE(WHEN)-' '-| decfloat-spec |-'

>--+-----+--+-----+--+-----+----->
'-| override-spec |-'

.-INDEXDEFER--NONE-----,
>--+-----+--+-----+--+-----+----->
'-INDEXDEFER--NPI+--+-----+-'
          '-ALL-'      '-NONUNIQUE-'

>--+-----+--+-----+--+-----+----->
'-IMPLICIT_TZ--'timezone-string'-'

.-----,
V          |
>----| INTO-TABLE-spec |----->< Resume-
spec: .-RESUME--NO-. .-SHRLEVEL-NONE-. >--+-----+--+-----+
+-----+--+-----+--+-----+--+----->< | '-REPLACE-' 'copy-spec' '-stats-'
| | .-BACKOUT--NO-----, .-SHRLEVEL--NONE---, | '-RESUME--YES--+'-----
-----+--+-----+--+-----+--+-----' | .-YES-. | '-SHRLEVEL--CHANGE-' '-
BACKOUT--+'-----+-' Labelled-duration-expression >--+CURRENT_DATE-----

```

```

-----+----->
'-CURRENT_TIMESTAMP---+'
      '-WITH TIME ZONE-'

.-----,
V                                         I
>-----+ -+-constant---+YEAR-----+>< ' - - - ' +
YEARS-----+ +-MONTH-----+ +-MONTHS-----+ +-DAY-----+ +-DAYS-----
-----+ +-HOUR-----+ +-HOURS-----+ +-MINUTE-----+ +-MINUTES-----+ +
SECOND-----+ +-SECONDS-----+ +-MICROSECOND---+ +-MICROSECONDS--+ Workddn-
spec: .-WORKDDN(SYSUT1, SORTOUT)----- , >>+-----
-----+----->

```

```

'-WORKDDN--+- (ddname1, ddname2)-----+'
      |           .-, SORTOUT-.     |
+- (ddname1-+-+-----+-) -+
      |     .-SYSUT1-.           |
'- (-+-----+-, ddname2) --'

```

Copy-spec:

```

>>+-----+----->
      |     .- (SYSCOPY)-----, |
'-COPYDDN-+-+-----+-'
      +- (ddname1-+-+-----+-) -+
      |           '-, ddname2-'     |
'- (, ddname2)-----'

```

```

>+-----+----->< ' -
RECOVERYDDN(ddname3-+-+-----+-) -' '-, ddname4-' Flashcopy-spec: .-
FLASHCOPY--NO----- , >>+-----
-----+----->< ' -FLASHCOPY--+-
YES-----+--+-----+-' '-CONSISTENT-' '-
FCCOPYDDN--(--template-name--)-' Stats-spec: >>-STATISTICS-----
-----+----->
      '-| stat-table-spec |-' '-| stat-index-spec |-'

```

```

.-REPORT--NO--. .-UPDATE--ALL-----,

```

```

>+-----+-----+----->
'-REPORT--YES-' '-UPDATE--+-ACCESSPATH-+-'
      +-SPACE-----+
      +-NONE-----+

```

```

.-INVALIDATECACHE-NO--.

```

```

>+-----+-----+----->
'-INVALIDATECACHE YES-' '-HISTORY--+-ALL-----+-'
      +-ACCESSPATH--+
      +-SPACE-----+
      '-NONE-----'

```

```
>+-----+----->< '-
FORCEROLLUP--YES+' '-NO--' Stat-table-spec: .-TABLE--(--ALL--)>+---
-----+-----+----->< | '-SAMPLE--
integer-' '-USE PROFILE-' | |
-----| | V | | '-TABLE--(--table-name--)+-----+-----
---' '-| table-stats-spec |-' Table-stats-spec: .-COLUMN-ALL-----
--->+-----+----->
'-SAMPLE--integer-' | |
| | V | | |
'-COLUMN--(--column-name+--)-'

>+-----+----->< | .,.-
-----| | | .,-----
. | | V V | | +---COLGROUP--(--column-name+--)-| colgroup-stats-spec
|+++ '-USE PROFILE-----'
Colgroup-stats-spec: >+-----+-----
----->
'-FREQUAL--+-----+-----+'
| | (1) .-MOST--|
'-COUNT--integer-----+'
+-BOTH--+
'-LEAST-'

>+-----+----->< | .-
NUMQUANTILES--100-----| '-HISTOGRAM--+-----+' '-
NUMQUANTILES--integer-' Stat-index-spec: .-INDEX--(--ALL--)>+---
-----| correlation-stats-spec |-----+----->< |
-----| | V | | '-INDEX--(--index-name-| correlation-stats-
spec |+--)-' Correlation-stats-spec: .-KEYCARD----->+-----+-----
----->

.-FREQUAL--NUMCOLS--1--COUNT--10-----
>+-----+----->
| |
| V | | |
'-FREQVAL--NUMCOLS--integer--+-----+-----+'
| | (2) .-MOST--|
'-COUNT--integer-----+'
+-BOTH--+
'-LEAST-'
.-NUMCOLS--1--NUMQUANTITIES--100-----
>-HISTOGRAM--+-----+----->< | .-
NUMQUANTILES--100-----| '-NUMCOLS--integer--+-----+' '-
NUMQUANTILES--integer-' Format-spec: >+-----+-----
-----+----->< '-FORMAT+-UNLOAD-----
-----+-----+' +-SQL/DS-----
```

```

-----+ +-INTERNAL-----
-----+ | .-COLDEL--','----- .-
CHARDEL--'"----- .-DECPT--'.'----- | +-DELIMITED-----+-----+-----
-----+-----+-----+ | '-COLDEL--coldel-' '-CHARDEL--chardel-'
'-DECPT--decpt-' | '-SPANNED--+-YES+------
-----' '-NO--' Decfloat-spec: >-----
-----+----->
'-DECFLOAT_ROUNDMODE--+-ROUND_CEILING---+-'
+-ROUND_DOWN-----+
+-ROUND_FLOOR-----+
+-ROUND_HALF_DOWN--+
+-ROUND_HALF_EVEN--+
+-ROUND_HALF_UP---+
'-ROUND_UP-----'

```

Override-spec:

```

V-----
>>-OVERRIDE--(-----+SYSTEMPERIOD-----+-----)----->< +-
IDENTITY-----+ +-TRANSID-----+ '-NONDETERMINISTIC-' INTO-TABLE-spec:
>>-INTO--TABLE-table-name--+-----+-----+-----+----->
'-PERIODOVERRIDE-' '-TRANSIDOVERRIDE-'
.-IGNOREFIELDS--NO--.
>+-----+-----+-----+----->
'-IGNOREFIELDS--YES-'

>+-----+-----+-----+-----
-----+>
| .-INDDN -SYSREC-----
---. |
'-PART-integer--+-----+--resume-spec--+-----+-----
-----+'
'-PREFORMAT-' +-INDDN-ddname--+-----
-----++
| .-
DISCARDN-ddname-' |
'-INCURSOR--cursor-name-----
-----'
>+-----+-----+-----+-----
----->
'-NUMRECS-integer-' '-WHEN--+-SQL/DS='table-name'-----+-'
'-field selection criterion-'

>+-----+-----+-----+-----
----->< | .-,-----, | | V | | '-(---field specification+-)-'
>+-----+-----+-----+-----
->< | .-,-----, | | V | | '-(---field specification+-)-'
Resume-spec: .-RESUME--NO-----, >>+-----+-----+-----+-----
-----+----->

```

```

|          '-REPLACE--+-----+--+-----+-' |
|          '-REUSE-' '-copy-spec-' |
| '-RESUME--YES-----'

```

```

>--+-----+----->< '-
KEEPDICTIONARY-' Field selection criterion: >>+field-name-----+====+
X'byte-string'----->< '-(start+-----+)-' +-'character-
string'+ '-:end-' +G'graphic-string'--+ +N'graphic-string'--+ Field
specification: >>-field-name-spec----->

```

```

>+-----+-----
----->
+CHAR--+-----+-----+-----+-----+
-----+
|      +-BIT-(length)-strip-spec-----+
|
|      +-CCSID 1208-strip-spec-----+
|
|      +-MIXED--strip-spec-----+
|
|      +-BLOBF--+-----+--+-----+-----+
|
|      |          '-PRESERVE WHITESPACE-' '-BINARYXML-' |
|
|      +-CLOBF--+-----+--+-----+-----+--+
|
|      |          '-MIXED-' '-PRESERVE WHITESPACE-' '-CCSID 1208-' |
|
|      '-DBCLOBF--+-----+--+-----+-----+'
|
|          '-PRESERVE WHITESPACE-' '-CCSID 1200-'
|
+VARCHAR--+-----+-----+-----+-----+
strip-spec-+
|      +-BIT-----+
|
|      +-CCSID 1208-----+
|
|      +-MIXED-----+
|
|      +-BLOBF--+-----+--+-----+-----|
|
|      |          '-PRESERVE WHITESPACE-' '-BINARYXML-' |
|
|      +-CLOBF--+-----+-----+-----+--+
|
|      |          '-+-----+--+-----+-----+'

```

```

|
|           |           '-MIXED-' '-PRESERVE WHITESPACE-' '-CCSID 1208-'
|
|           '-DBCLOBF'+-----+-----+-----+-----+'
|
|           '-PRESERVE WHITESPACE-' '-CCSID 1200-'
|
+-GRAPHIC+-----+-----+strip-spec+-----+-----+
-----+
|           '-EXTERNAL-' '-(length)-'           '-CCSID 1200-'
|
+-VARGRAPHIC--strip-spec--+-----+-----+-----+-----+
-----+
|
|           '-CCSID 1200-'
|
+-SMALLINT-----+-----+-----+-----+-----+
-----+
+-INTEGER+-----+-----+-----+-----+-----+
-----+
|           '-EXTERNAL'+-----+-----+'
|
|           .-(length)-'
|
+-BIGINT-----+-----+-----+-----+-----+
-----+
+-BINARY+-----+strip-spec-----+-----+-----+
-----+
|           '-(length)-'
|
+-+VARBINARY-----+strip-spec-----+-----+-----+
-----+
| '-BINARY VARYING-'
|
+-decimal-spec-----+-----+-----+-----+-----+
-----+
+-FLOAT+-----+-----+-----+-----+-----+
-----+
|           '-EXTERNAL-' '-(length)-'
|
+-DATE--EXTERNAL--+-----+-----+-----+-----+
-----+
|           '-(--+length-----+)-'
|
|           '-date-format-'
|
+-TIME--EXTERNAL--+-----+-----+-----+-----+
-----+

```

```

|          '-(--length-----+)-'
|
|          '-timestamp-format-'
|
+-TIMESTAMP-WITH-TIME-ZONE--EXTERNAL--+-----+-----+-----+
-----+
|          '-(length)-'
|
+-ROWID-----+
-----+
+-BLOB-----+
-----+
+-CLOB-----+-----+-----+
-----+
|          '-MIXED--+-----+--'
|
|          '-CCSID 1208-'
|
+-DBCLOB-----+-----+-----+
-----+
|          '-CCSID 1208-'
|
|          .-(34)-----,
|
+-DECFLOAT-----+-----+-----+
-----+
|          +--(16)-----+
|
|          '-EXTERNAL--+-----+--'
|
|          '-(length)-'
|
'-XML-----+-----+-----+-----+-----+-----+-----+
-----+
          '-PRESERVE WHITESPACE-' '-BINARYXML-'

>-----+-----+-----+-----+-----+-----+-----+----->< +-NULLIF--
field selection criterion----+ '-DEFAULTIF--field selection criterion-' Field
name spec: >>-field-name-----+-----+-----+-----+-----+-----+
-->< +-POSITION(start+-----+)------+ | '-:end-' | '-CONSTANT(--+
'string'-----+)-' +-X'hex-string'-----+ +-integer-----+ +-CURRENT
DATE-----+ +-CURRENT TIME-----+ +-CURRENT TIMESTAMP+ '-NULL-----'
Strip-spec: >>-----+-----+-----+-----+-----+-----+-----+
----->
|          .-BOTH -----, |
'-STRIP-----+-----+-----+-----+-----+-----+-----+

```

```

+-TRAILING--+ | (1) |
+-LEADING--' +- 'strip-char'-----+
              '-X'strip-char'-----'
>+-----+----->< '-
TRUNCATE-' Decimal-spec: .-PACKED-----, >>-DECIMAL-+-
-----+----->< +-ZONED-----
-----+
      '-EXTERNAL-+-+-----+-----'
              | .-,0-----|
              '-(length-+-+-----+)-'
              '-,scale-'

```

MERGECOPY

```

>>-MERGECOPY-----
->
>+--LIST--listdef-name-----+
->
| .-DSNUM--ALL-----|
'-TABLESPACE--+-----+table-space-name--+-----+'
      '-database-name.-'          '-DSNUM--integer-'
      .-WORKDDN--SYSUT1-.
>+-----+-----+-----+-----+-----+-----+-----+-----+-----><
->
'-CLONE-' '-WORKDDN--ddname-'
      .-NEWCOPY--NO-. .-COPYDDN--SYSCOPY-----
>+-----+-----+-----+-----+-----+-----+-----+-----+-----><
|          +-COPYDDN(ddname1-+-+-----+)------+ |
|          |          '-,ddname2-' | |
|          +-COPYDDN(,ddname2)-----+ |
|          '-RECOVERYDDN(ddname3-+-+-----+)-' | |
|          |          ',ddname4' | |
|          .-COPYDDN--SYSCOPY----- |
'-NEWCOPY-YES-+-+-----+-----+-----+-----+'
      +-COPYDDN(ddname1-+-+-----+)-+ '-RECOVERYDDN(ddname3)'
      |          ',ddname2-' | |          ',ddname4'
      '-COPYDDN(,ddname2)-----'

```

MODIFY RECOVERY

```

>>-MODIFY--RECOVERY----->
>+--LIST--listdef-name-----+----->
'-TABLESPACE--+-----+table-space-name-'
      '-database-name.-'
      .-DSNUM--ALL-----

```



```

>--+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+----->
    '-DSNUM--integer-'  '-CLONE-'
>--+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+----->
    '-DELETDS-'  '-NOCOPYPEND-'
>--+-+--DELETE+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----><
|      +-AGE+-integer-+-+-----+ |
|      |      '-(*)-----' |      |
|      |      '-DATE+-integer-+-+' |
|      |      '-(*)-----' |
|      '-RETAIN-----+--LAST--(--integer-)------+-+-----+'
|      +-LOGLIMIT-----+-+-----+
|      +-GDGLIMIT+-+-----+-+-----+'
|      +-LAST--(--integer--)+
|      +-LOGLIMIT-----+'

```

MODIFY STATISTICS

```

>>--MODIFY--STATISTICS-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+----->
>--+-+--LIST-- listdef-name-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+----->
    +-TABLESPACE-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+
    |      'database-name.-' |
    +-INDEXSPACE-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+
    |      'database-name.-' |
    '-INDEX-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+'
    'creator-id.-'
>--DELETE+-+ALL-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----><
+-ACCESSPATH+ |      '-(*)-----' |
    '-SPACE-----'  '-DATE+-integer-+-+'
    '-(*)-----'

```

OPTIONS

```

>>--OPTIONS-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+----->
>+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----><
| '-PREVIEW-'  '-LISTDEFD-ddname-'  '-TEMPLATEDD-ddname-'  '-event-spec-' | +-
OFF-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+
-key-value-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+-+-----+'-KEY-
.-ITEMERROR,HALT-. .-WARNING,RC4-. >>-EVENT--(--+-----+-+-----+-+-----+-+-----+
-----+-+-----)----->< '-ITEMERROR,SKIP-'  '-,-'  +-WARNING,RC0-+-
                    +-WARNING,RC8-'

```

QUIESCE

```

>>-QUIESCE----->
>--+LIST-listdef-name-----+>
| .-----|
| V-----|
|---+TABLESPACE+-----+table-space-name+-----+-'
|         '-database-name.-'          '-PART-integer-'||
|TABLESPACESET+-----+-----+table-space-name-|
|         '-TABLESPACE-' '-database-name.-'
      .-WRITE--YES-.
>--+-----+-----+-----+-----+-----+-----+-----
->< '-CLONE-' '-WRITE--NO--'

```

REBUILD INDEX

```

>>-REBUILD-----
----->
      .-----
      V-----|
>--+INDEX--+-(-----creatorid.index-name-----+-----)-+-----
-----+>
|         |         '-PART--integer-'         |
|
|         +- (ALL)--table-space-spec-----+
|         '-LIST--listdef-name-----'
|
|         .-----
|         V-----|
|
|         '-INDEXSPACE--+-(-----+-----+-----+-----index-space-name--+-----+
+---+---)-+-'
|         |         '-database-name.-'          '-PART-integer-
|         +- (ALL)--table-space-spec-----
-----+
|         '-LIST--listdef-name-----
-----'
      .-SHRLEVEL--REFERENCE-----
>--+-----+-----+-----+-----+-----+-----+-----
->
      '-SHRLEVEL--CHANGE--change-spec-'         '-CLONE-'

```


' -REPORT--YES- '

```
.-UPDATE-ALL-..... .-INVALIDATECACHE NO--.  
>+-----+-----+-----+-----+----->  
' -UPDATE--ACCESSPATH--' ' -INVALIDATECACHE YES- '  
+-SPACE ------+  
' -NONE-.....'  
  
>+-----+-----+-----+-----+-----<< '-  
HISTORY--ALL-----+ ' ' -FORCEROLLUP--YES--' +-ACCESSPATH+ '-NO--' +-  
SPACE ------+ '-NONE-.....' Correlation-stats-spec: .-KEYCARD-----, >+-----  
-----+-----+-----+-----+----->
```

```
.-FREQVAL--NUMCOLS--1--COUNT--10-----.  
>+-----+-----+-----+-----+----->  
| |-----+-----+-----+-----+-----| |  
| V |-----+-----+-----+-----+-----| |  
' ---FREQVAL--NUMCOLS--integer-----+-----+-----+-----+-----'  
|-----+-----+-----+-----+-----| |  
' -COUNT--integer-----+-----+-----+-----+-----'  
+-BOTH--+  
' -LEAST-'
```

```
.-NUMCOLS--1--NUMQUANTILES--100-----.  
>-HISTOGRAM--+-----+-----+-----+-----+-----<< |  
' -NUMQUANTILES--100-----, |  
| -NUMCOLS--integer-----+-----+-----+-----+-----'  
' -NUMQUANTILES--integer-'
```

RECOVER

```
>>-RECOVER-----  
->  
>+---LIST-listdef-name-----+---list-options-spec+-----  
->  
| |-----+-----+-----+-----+-----| |  
| | V |-----+-----+-----+-----+-----| |  
| ' ---object-----+-----+-----+-----+-----'  
| ' -DSNUM--integer-----'  
| |-----+-----+-----+-----+-----| |  
+-object-----+-----+-----+-----+-----recover-options-spec-----+  
| ' -DSNUM--integer-----'  
' -object--PAGE--page-number-----+-----+-----+-----+-----'  
' -CONTINUE- '  
' -LOGRANGES--YES-----, .
```



```
-->
'-REUSE-' '-CURRENTCOPYONLY-' '-ENFORCE--NO--'

>+-----+-----+-----+-----+----->
'-NOSYSCOPY--+-'
      +-INLCOPY-+
      '-FCCOPY--'

>+-----+-----+-----+-----+----->< '-
FLASHCOPY_PRCP--+-NO-----+ '-PMNO--+ +-PMPREF-+ '-PMREQ -' Image-copy-
spec: >>-TOVOLUME-+-CATALOG-----+----->< '-
vol-ser+-----+-'
          '-TOSEQNO--integer-'
```

REORG INDEX

```
>>-REORG--+-INDEX--LIST--listdef-name+-----+----->
      '-index-name-spec-----' '-REUSE-' '-CLONE-'

      .-SHRLEVEL NONE-----.
>+-----+-----+-----+-----+----->
      '-SHRLEVEL-+-REFERENCE--deadline-spec--drain-spec-----+-'
      '-CHANGE--deadline-spec--drain-spec--change-spec-'

      .-FASTSWITCH YES----.
>+-----+-----+-----+-----+----->
      '-FASTSWITCH NO-----'

      .-FORCE--NONE----.
>+-----+-----+-----+-----+----->
      '-LEAFDISTLIMIT-+-----+-----+-----+-' +-FORCE--READERS-+
          '-integer-' '-REPORTONLY-' '-FORCE--ALL----'

      .-UNLOAD--CONTINUE-----.
>+-----+-----+-----+-----+----->
      '-UNLOAD--+-PAUSE-----+-' '-stats-spec-----'
          '-ONLY-----'
      .-WORKDDN--(SYSUT1)-.

>+-----+-----+-----+-----+----->
      '-WORKDDN--(ddname)-' '-PREFORMAT-'

>+-----+-----+-----+-----+-----><
| .-NO-----| '-FLASHCOPY--+-YES-----+-----+-' '-
CONSISTENT-' '-FCCOPYDDN(ddname)-' >+-----+-----+----->
----->< '-RBALRSN_CONVERSION--+-NONE-----+-' +-
BASIC----+ '-EXTENDED-' Index-name-spec >>+-----+-----+----->
name----->
```



```

>+-----+-----+-----+-----+-----+-----+-----+-----+-----+
->
'-LOG--NO--'                                     '-NOSYSREC-'
        .-AUTOESTSPACE YES-.
>-| copy-spec |-----+-----+-----+-----+-----+-----+-----+
->
        '-AUTOESTSPACE NO--'

        .-SHRLEVEL NONE-----,
>+-----+-----+-----+-----+-----+-----+-----+-----+-----+
'-SHRLEVEL--+-REFERENCE--| deadline-spec |--| drain-spec |-----+-->
        '-CHANGE-|deadline-spec|--|drain-spec|--|table-change-spec|- '

        .-FASTSWITCH YES-.   .-AUX NO--.          .-FORCE--NONE----.
>+-----+-----+-----+-----+-----+-----+-----+-----+-----+
'-FASTSWITCH NO--.   -'AUX YES-'       +-FORCE--READERS-+
        ' -FORCE--ALL----- '

>+-----+-----+-----+-----+-----+-----+-----+-----+-----+
+-SORTNPSI--AUTO---+
+-SORTNPSI--YES----+
'-SORTNPSI--NO-----'

>+-----+-----+-----+-----+-----+-----+-----+-----+-----+
->
|           .-10-----,           .-10-----,           |
'-OFFPOSTLIMIT--+------+-INDREFLIMIT--+------+-----+-----+-----+'
        '-integer-'                '-integer-' '-REPORTONLY-'
        .-UNLOAD--CONTINUE--.

>+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| |           (1) | '-KEEPDICTIONARY-' '-| statistics-spec |-' |
| '-UNLOAD--PAUSE-----'                                     |
+-UNLOAD--ONLY-----+-----+-----+-----+-----+-----+
'-UNLOAD--EXTERNAL--+------+-----+-----+-----+-----+'
        ' -NOPAD-' | .-----, |
                    | V           | |
                    '---| FROM-TABLE-spec |+-'

        .-PUNCHDDN--SYSPUNCH-.   .-DISCARDDBN--SYSDISC-.
>+-----+-----+-----+-----+-----+-----+-----+-----+-----+
->
'-PUNCHDDN--ddname---' '-DISCARDDBN--ddname--'

>+-----+-----+-----+-----+-----+-----+-----+-----+-----+
->
'-| reorg tablespace options |-'

```

```

>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
->
|           |           |           |           |           |           |           |
|           |           |           |           |           |           |           |
'-DISCARD--+-+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
          '-NOPAD-'
.-PARALLEL-0-----
>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
->
'-PARALLEL--(--num-subtasks--)-'

```

Copy-spec

```

.-COPYDDN(SYSCOPY)-----
>>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
->
'-COPYDDN(--ddname1--+-+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
          |           |           |           |           |           |           |           |
          '-,ddname2-' |
          '-,ddname2-----'
>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
->
'-RECOVERDDN(ddname3--+-+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
          |           |           |           |           |           |           |           |
          '-,ddname4-'
>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
->< | .-NO-----, | '-FLASHCOPY--+-YES-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
'-CONSISTENT-' '-FCCOPYDDN(ddname)-' Deadline-spec .-DEADLINE--NONE-----
-----, >>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
----->< '-DEADLINE--+-timestamp-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
labeled-duration-expression-' Drain-spec >>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
'-DRAIN_WAIT--integer-' '-RETRY--integer-'
          .-TIMEOUT--TERM--.
>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
'-RETRY_DELAY--integer-' '-TIMEOUT--ABEND-'
.-LOGRANGES--YES-. .-DRAIN_ALLPARTS--NO--.
>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
->
'-LOGRANGES--NO--' '-DRAIN_ALLPARTS--YES-'
.-SWITCHTIME--NONE-----
>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| .-NEWMAXRO--NONE----, | '-SWITCHTIME--+-timestamp-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
Change-spec: .-MAXRO-----, .-DRAIN--ALL-----, >>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+

```

```

--+--+-----+-----+-----+-----+-----+-----+-----+-----+----->
'-MAXRO--+-integer+-' '-DRAIN--WRITERS-'
'-DEFER--'

.-LONGLOG--CONTINUE-. .-DELAY--1200----.
>+--+-----+-----+-----+-----+-----+-----+-----+-----+----->
'-LONGLOG--+-TERM--+-' '-DELAY--integer-'
'-DRAIN-'

Map-spec:
>>+--+-----+-----+-----+-----+-----+-----+-----+-----+----->>
+-MAPPINGTABLE--table-name-----+ +-MAPPINGDATABASE--database-name-'
Labelled-duration-expression >>+-CURRENT_DATE-----
----->
'-CURRENT_TIMESTAMP--+-+-----+-----+-----+'
'-WITH TIME ZONE-'

.-----
V I

>---+--+ -+-constant--+YEAR-----+-----+-----+-----+-----+----->>
+-YEARS-----+ +-MONTH-----+ +-MONTHS-----+ +-DAY-----+ +-DAYS-----
-----+ +-HOUR-----+ +-HOURS-----+ +-MINUTE-----+ +-MINUTES-----+
+-SECOND-----+ +-SECONDS-----+ +-MICROSECOND--+ +-MICROSECONDS--+
Statistics-spec >>--STATISTICS-----
----->
.-TABLE--(--ALL--)-.

>+--+-----+-----+-----+-----+-----+-----+-----+-----+-----
->
| '-SAMPLE--integer-' |
| .-----, |
| V | |
| ---TABLE--(--table-name--)--| table-stats-spec |+-'

.-INDEX--(--ALL--)-.

>+--+-----+-----+-----+-----+-----+-----+-----+-----+-----
->
| .-----, | |
| V | |
| -INDEX--(--index-name--| correlation-stats-spec |+-)--'

.-REPORT--NO--. .-UPDATE--ALL-----
>+--+-----+-----+-----+-----+-----+-----+-----+-----+-----
->
'-REPORT--YES-' '-UPDATE--+-ACCESSPATH+-'
+-SPACE-----+
'-NONE-----'

>+--+-----+-----+-----+-----+-----+-----+-----+-----+-----

```

```

->< '-HISTORY--+-ALL-----+' '-FORCEROLLUP--+-YES--+' +ACCESSPATH--+ '-NO-
-' +SPACE-----+ '-NONE-----' Stat-table-spec .-TABLE--(--ALL--)-. >>+--+
-----+--+-----+--+-----+--+-----+--+>< | '-SAMPLE--
integer-' '-USE PROFILE-' | | .-----+--+-----+--+-----+--+-----
-----, | | V | | | '----TABLE--(--table-name--)-+-----+--+-----
-' '-| table-stats-spec |-' Table-stats-spec .-COLUMN--ALL-----
. >>+-----+--+-----+--+-----+--+-----+----->
'-SAMPLE--integer-' | | | | .,-----, | |
| | | | V | | | |
'-COLUMN--(--column-name--)-'

>+-----+-----+-----+-----+-----+-----+-----+-----+----->< | .,.-
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
. | | | V V | | | +---COLGROUP--(--column-name--)-| colgroup-stats-spec
|+--- '-USE PROFILE-----'
Colgroup-stats-spec: >>+-----+-----+-----+-----+-----+-----
----->
'-FREQVAL-----+-----+-----+'
| | | | .-MOST--. |
'-COUNT--integer-----+-----+'
+---BOTH--+
'-LEAST-'

>+-----+-----+-----+-----+-----+-----+-----+-----+----->< | .-
NUMQUANTILES--100-----, | '-HISTOGRAM--+-----+-----+' '-
NUMQUANTILES--integer-' Stat-index-spec .-INDEX--(--ALL--)-. >>+--+-----
-----+---| correlation-stats-spec |-----+----->< | .,-----+-----
-----+-----, | | V | | | '-INDEX--(--index-name--| correlation-stats-
spec |+---)-' Correlation-stats-spec: .-KEYCARD-----, >>+-----+-----
-----+-----+-----+-----+-----+----->

.-FREQVAL--NUMCOLS--1--COUNT=10-----+-----+-----,
>+-----+-----+-----+-----+-----+-----+-----+-----+----->
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
'----FREQVAL--NUMCOLS--integer-----+-----+-----+'
| | | | .-MOST--. |
'-COUNT--integer-----+-----+'
+---BOTH--+
'-LEAST-'

.-NUMCOLS--1--NUMQUANTILES=100-----+-----+-----,
>--HISTOGRAM--+-----+-----+-----+-----+-----+-----+-----+-----+----->
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
.-NUMCOLS--integer-----+-----+-----+'
'-NUMQUANTILES--integer-'

```

FROM-TABLE spec

```
>>-FROM--TABLE--table-name-----
->
>+-----+
->< '-WHEN--(--selection-condition-spec--)' Selection-condition spec >>+-
predicate----->
  '-selection condition-'
  .-----.
  V               I
>+-----+-----+-----><
'-+AND+--+predicate-----+' '-OR--' '-selection condition-'
Predicate >>+-basic predicate--+-----
----->< +BETWEEN predicate+ +IN predicate-----+ +LIKE predicate-----+
'-NULL predicate----' Basic predicate >>-column-name--+ = --+-----
----->
      +- <> +-
      +- > --+
      +- < --+ +- >= +-
      '- < = -' >--+constant-----+-----
----->< '-labeled-duration-expression-' Between predicate
>>-column-name--+-----+BETWEEN----->
      '-NOT-'
>--+constant-----+AND----->
      '-labeled-duration-expression-'
>--+constant-----+-----><
'-labeled-duration-expression-' IN predicate .,-----, V I >>-column-name-
+-----+IN--(--constant+-)----->< '-NOT-' ' LIKE
predicate >>-column-name--+-----+LIKE--string-constant-----
----->
      '-NOT-'
>+-----+-----+-----><
'-ESCAPE--string-constant-' NULL predicate >>-column-name--IS--+-----+--NULL-
----->< '-NOT-' Reorg tablespace options
.-UNLDDN--SYSREC-. >>+-----+-----+-----+-----+-----
----->
      '-UNLDDN--ddname-' '-SORTDEVT--device-type-'
>+-----+-----+-----+-----+----->
      '-SORTNUM--integer-' '-PREFORMAT-' '-ROWFORMAT--BRF-'
                                   | -RRF- |
>+-----+-----+-----><
'-RBALRSN_CONVERSION--NONE-----+'
      +-BASIC-----+
      '-EXTENDED-'
```

REPAIR

```
>>-REPAIR----->
>+-----+----->
|      |      |-----|
| .-OBJECT-. .-LOG--YES-.      V      | |
++-----++-----++---+set statement-++-----+
|      |      ' -LOG--NO--' | ' -locate block--' | |
|      |      |      ' -dbd-statement-----' |
+-level-id statement-----+
+-versions statement-----+
' -catalog statement-----+
>+-----+----->>
' -CLONE-' Level-id statement >>-LEVELID-----
----->
>+-+---TABLESPACE---+-----+table-space-name-+----->
|      |      ' -database-name.-' |
' -index-name-spec-----'
>+-----+----->>
' -PART--integer-' Versions statement >>-VERSIONS-----
----->
>+-+---TABLESPACE---+-----+table-space-name-+----->>
| ' -database-name.-' | ' -index-name-spec-----'
Catalog statement >>-CATALOG--TABLESPACE---+-----+table-space-
name----->
            ' -database-name.-'
>+-----+----->
' -TEST-'
```

Index-name spec

```
>>-+INDEX-+-----+index-name-----+----->>
| ' -creator-id.-' | ' -INDEXSPACE-+-----+index-space-name-' '-
database-name.-' Set statement >>-SET-----
----->
```

```
>+ |table-space-spec|+-----++NOCOPYPEND-----+-----
-----+>< | ' -PART--integer-' +-NORCVRPEND-----+ | | +-NOCHECKPEND-----+
| | +-NOAUXWARN-----+ | | +-NOAUXCHKP-----+ | | +-NOAREORPENDSTAR-+ | |
+-NOAREORPEND-----+ | | +-PRO-----+ | | +-NOPRO-----+ | '-+
INDEX-+(index-name-+-----+)-+-----++NOCOPYPEND-----+'
| | ' -PART--integer-' | | +-NORCVRPEND-----+ | ' -(--ALL--)--| table-space-
spec |-' | +-NORBDPEND-----+ ' -INDEXSPACE-+(-+-----+index-space-+
-----+)-+-NOCHECKPEND-----+ | ' -database.-' ' -PART-int' | +-
NOAREORPENDSTAR-+ ' -(--ALL--)--table-space-spec-----' +-NOAREORPEND-
--+ +-RBDPEND-----+ ' -PSRBDPEND-----' Table-space-spec: >>-TABLESPACE--
+-----+table-space-name----->< ' -database-
```

name.-'

REPORT

```
>>-REPORT----->
                                                    .-INDEX NONE-.
>+-RECOVERY+-TABLESPACE+-LIST-listdef-name---+---+-----+---+---><
| | '-tablespace-name-spec' '-INDEX ALL-' | 'info' | | '-index-list-spec-----
-----' | '-TABLESPACESET-+------+---table-space-
name-spec-+------+---' '-TABLESPACE-' '-SHOWSNS-' Index-list-spec >+-
INDEXSPACE-+-+-----+---index-space-name-+-+----->< | |
'-database-name.-' | | | '-LIST-listdef-name-----' | '-INDEX--
+-+-----+---index-name-+-+-----' | '-creator-id.-' | '-LIST--
listdef-name-----' Info-options .-DSNUM--ALL----- . >+-+-----+---+
+-----+---+-----+----->
    '-DSNUM--integer-' '-CURRENT-' '-SUMMARY-'
                                     .-ARCHLOG--1-----,
>--+-----+---+-----+---+-----+-----><
'-LOCALSITE-' '-RECOVERYSITE-' '-ARCHLOG--+-2---+-' '-ALL-' Table-space-name-
spec >+-+-----+---table-space-name-----
--->< '-database-name.-'
```

RESTORE SYSTEM

```
>>-RESTORE SYSTEM----->
>--+ | non-LOGONLY spec |-----+----->< '-
LOGONLY--+-----+-----+ '- SWITCH VCAT--
+-----+-----+ '-SYSVALUEDDN(ddname)-' Non-LOGONLY spec >--+
----->
    '-ALTERNATE_CP(copy-pool)-'
>--+-----+----->
    '-RESTOREBEFORE-- X'byte-string'-'
>--+-----+----->
+-FROMDUMP-+-+-----+---+-----+---+
|           '-DUMPCLASS-(dcl)-''-RSA-(key-label)-''-TAPEUNITS-+-+-----+-'
|                                     'units' |
'-FLASHCOPY_PPRCP-+-NO-----+-----'
                +-PMNO---+
                +-PMPREF-+
                '-PMREQ -'
```

RUNSTATS

```
>>-RUNSTATS--TABLESPACE--+-| listdef-spec |-----+----->
      '-| table-space-spec |-'

      .-| statistics-spec |-.
>--+-----+----->< '-|
reset-spec |-----' Listdef-spec .-INVALIDATECACHE NO--. >>-LIST--listdef-
name--+-----+----->< '-INVALIDATECACHE
YES-' Table-space-spec >>--+-----+-----table-space-name-----
----->
      '-database-name.-'

>--+-----+----->
      |                .-FORCEROLLUP--NO--. |
      '-PART--integer--+-----+-----'
                '-FORCEROLLUP--YES-'

      .-INVALIDATECACHE NO--.
>--+-----+----->< '-
INVALIDATECACHE YES-' Statistics-spec >>--+-----+-----
----->
      |                .-(ALL)-.                |
+TABLE-----+-----+--| all-tables-spec |-----+
      | .-,-----, |
      | V                | |
      '---TABLE-----table-name--| named-tables-spec |+-'

>--+-----+----->
      '-+-INDEX-----(--ALL--)--| correlation-stats-spec |-----+--'
      +-INDEX--(--*-----)--| correlation-stats-spec |-----+
      |                .-,-----, |
      |                V                | |
      '-INDEX--(----index-name--| correlation-stats-spec |+---)-'
                .-REGISTER--YES-.
      .-SHRLEVEL--CHANGE +-----+-.
      |                '-REGISTER--NO--' | .-REPORT--NO--.
>--+-----+-----+----->
      '-SHRLEVEL--REFERENCE-----' '-REPORT--YES-'

      .-UPDATE--ALL-----,
>--+-----+-----+-----| history-spec |----->
      '---UPDATE--+-ACCESSPATH+---'
                +-SPACE-----+
                '-NONE-----'

>--+-----+----->< '-SORTDEVT-
```



```

-device-type- ' All-tables-spec >>---+ | sample-spec |---+-----
-+-+----->< | '-| use-profile-spec |-' | '-DELETE PROFILE-----
-----' Named-tables-spec >>---+ | sample-spec |-----+ | column-
spec |---+-----+-----+>< | | '-| colgroup-spec |-' | | | | |
| '----| use-profile-spec |-----' | +-| column-spec |---+-----
-----+-----+-----+-----+ | '-| colgroup-spec |-' | | | |
'-| set-profile-spec |-----' | | | '-DELETE PROFILE-----
-----' Sample-spec >>---+-----
-----+>< | .25-----, | +-SAMPLE---+-----
+-----+ | '-integer-' | | .-AUTO-----
-----, | '-TABLESAMPLE SYSTEM---+numeric-literal---+-----+
' '-REPEATABLE-integer-' Use-profile-spec >>---USE PROFILE-----
-----+----->< '-INCLUDE---+-(NPI)---+ '-NPI---' Column-spec:
.-COLUMN--(--ALL--)------, >>---+-----
+----->
| .,-----, |
| V | |
'-COLUMN--(--column-name-----+--)-'

>---+-----+----->< '-SORTNUM-
integer-' Colgroup-spec: .-----
----, | .,-----, | V V | | >>---COLGROUP--(--column-name---+---|
colgroup-stats-spec |--->< Colgroup-stats-spec: >>---+-----
-----+----->
'-FREQVAL +-----+-'
| .-MOST--. |
'-COUNT--integer-----+-----+-'
+-BOTH--+
'-LEAST-'

>---+-----+----->< | .-
NUMQUANTILES--100-----, | '-HISTOGRAM---+-----+-' '-
NUMQUANTILES--integer-' Correlation-stats-spec: >>---+-----+-----
----->
'-KEYCARD-----'

,-----,
V .-FREQVAL -NUMCOLS--1--COUNT--10--MOST-----, |
>---+-----+-----+----->
'-FREQVAL -NUMCOLS--integer-----+-----+-'
| .-MOST--. |
'-COUNT--integer-----+-----+-'
+-BOTH--+
'-LEAST-'

,-----,
V |

```

```
>-----+----->
| .-NUMCOLS--1--NUMQUANTITIES--100----- . | '-HISTOGRAM--+-----
-----+-' | .-NUMQUANTILES--100----- . |
'-NUMCOLS--integer-----+' '-NUMQUANTILES--integer-
' Set-profile-spec: >>+SET--PROFILE--+-----++-----
----->< | | (1) | | | '-FROM EXISTING STATS-----' | '-UPDATE--PROFILE-----
-----' History-spec .-HISTORY--NONE----- . >>-----+-----
-----+----->< '-HISTORY--+ALL-----
----+'
                +-ACCESSPATH-+
                '-SPACE-----'
```

STOSPACE

```
                .-,------.
                V                |
>>-STOSPACE--STOGROUP(+-----stogroup-name+--+)------
-->< '-+-----'
```

TEMPLATE

```
>>-TEMPLATE--template-name--DSN-name-expression-----
--->
>+-----+-----+-----+-----+-----+-----+-----+-----
--->
' -common-options-' +-disk-options-+
' -tape-options-'
>+-----+-----+-----+-----+-----+-----+-----+-----
--->
' -SUBSYS--name--LRECL--int--RECFM--+-----+'
                +-F--+
                +-FB-+
                +-V--+
                '-VB-'
>-path-expression-----
-->< Name-expression .,----- . V | >>--qualifier-expression-
+----->
>+-----+-----+-----+-----+-----+-----+-----+-----
-->< '-(parenthetical-expression)-' Qualifier expression .-----
-----, V | >>--+character-expression-----
-----++----->< '&variable-+-----
-----+-----' '-(start+-----+)------' '-,length-' Common-options .-
UNIT--SYSALLDA-. >>+-----+-----+-----+-----+-----+-----
----->
```



```

'-DECFLOAT_ROUNDMODE-+-ROUND_CEILING---' '-IMPLICIT_TZ-timezone-string-'
      +-ROUND_DOWN-----+
      +-ROUND_FLOOR-----+
      +-ROUND_HALF_DOWN-+
      +-ROUND_HALF_EVEN-+
      +-ROUND_HALF_UP---+
      +-ROUND_UP-----+
>+-----+
->
  '-IMPLICIT_TZ--'timezone-string'- '
  .-PARALLEL--0-----,
>+-----+
->< '-PARALLEL-num-subtasks-' From-table spec >>-FROM--TABLE--table-name-----
----->
  .-HEADER--OBID-----,
>+-----+
->
  '-HEADER--+-NONE-----+- '
      '-CONST--+-'string'-----+- '
      '-X'hex-string'- '
>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
->
  '-SAMPLE--decimal-' '-LIMIT--integer-'
>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
->
  | .,-----, |
  | V          | |
  '-(---field-specification+-)-'
>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
->< '-WHEN--(selection-condition)-' Field spec .-POSITION(*)-----, >>-field-
name--+------+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
      '-POSITION(start)-'
>+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+><
+-CHAR-+------+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
(length)-' +-TRUNCATE-----+ | | '-+-BLOBF---+-
template-name---+-----+-----+ | | +-CLOBF---+ '-BINARYXML-' | | '-DBCLOBF-' |
+-VARCHAR-+------+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
(length)-' +-strip-spec-----+ | | '-+-BLOBF---+-
template-name-+-+-----+-----+ | | +-CLOBF---+ '-BINARYXML-' | | '-DBCLOBF-' |
+-GRAPHIC-+------+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
EXTERNAL-' '-(length)-' '-TRUNCATE-' | +-VARGRAPHIC-+-+-----+-----+strip-spec-
-----+ | '-(length)-' | +-SMALLINT-----
-----+ +-----+ +-----+ +-----+ +-----+ +-----+ +-----+ +-----+
-----+ | '-EXTERNAL-+-+-----+-----+' | | '-(length)-' |
+-BIGINT-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
+-+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
TRUNCATE-' | +-+-VARBINARY-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+

```

```

--+ | '-BINARY VARYING-' | +-strip-spec-----
-----+ | .-PACKED---. | +-DECIMAL--+-----+--+-----
-----+-----+ | +-ZONED-----+ | .-,0-----. | | | '-EXTERNAL-' '-
(length)-+-----+)-' | | '-,scale-' | +-FLOAT+-----+-----+-----
-----+ | '-EXTERNAL-' '-(length)-' | +-DOUBLE-----
-----+ +-REAL-----
-----+ +-DATE--EXTERNAL--+-----+-----
-----+ | '-(length)-' | +-TIME--EXTERNAL--+-----
-----+ | '-(length)-' | +-TIMESTAMP--
EXTERNAL--+-----+-----+ | '-(length)-' | +-
TIMESTAMP WITH THE ZONE EXTERNAL-----+-----+-----+ | '-
(length)-' | +-CONSTANT--+-'string'-----+-----
--+ | '-X'hex-string-' | +-ROWID-----
-----+ +-BLOB+-----+-----+-----
-----+ | '-(length)-' '-TRUNCATE-' | +-CLOB+-----+-----+-----
-----+ | '-(length)-' '-TRUNCATE-' | +-DBCLOB+-----
--+-----+-----+ | '-(length)-' '-TRUNCATE-'
| | .-(34)-----, | +-DECFLOAT--+-----+-----
-----+ | +-(16)-----+ | | '-EXTERNAL--+-----
--+ | | '-(length)-' | '-XML--+-----+-----
-----' '-BINARYXML-' Strip spec >>+-----
-----+----->
| .-BOTH----. |
'-STRIP--+-----+-----+'
+-TRAILING--+ | |
'-LEADING--' +- 'strip-char'-----+
'-X'strip-char'-----'

```

Selection-condition spec

```

>>+-predicate-----+-----
->
'-selection condition-'
.-----,
V |
>-----+-----+-----+-----+-----
->< '-+AND+--+predicate-----+' '-OR--' '-selection condition-'
Predicate >>+-basic predicate-----+-----
----->< +-BETWEEN predicate+ +-IN predicate-----+ +-LIKE predicate-----+
+-NULL predicate-----+ Basic predicate >>-column-name--+ = --+-----
----->
+- <> -+
+- > --+
+- < --+ +- >= -+
'- < = -' >--+constant-----+-----
----->
'-labeled-duration-expression-'

```

IN predicate

```

      .,-----,
      V           I
>>-column-name--+-----+--IN--(---constant+--)------><
'-NOT-' LIKE predicate >>-column-name--+-----+--LIKE--string-constant-----
----->
      '-NOT-'
>+-----+-----+-----><
'-ESCAPE--string-constant-' NULL predicate >>-column-name--IS--+-----+--NULL-
----->< '-NOT-' Labeled-duration-
expression >>+--CURRENT_DATE-----+-----
----->
      '-CURRENT_TIMESTAMP-----+--'
      '-WITH TIME ZONE-'
      .,-----,
      V           I
>---+- + -+-constant--+--YEAR-----+-----><
+-YEARS-----+
      +-MONTH-----+
      +-MONTHS-----+
      +-DAY-----+
      +-DAYS-----+
      +-HOUR-----+
      +-HOURS-----+
      +-MINUTE-----+
      +-MINUTES-----+
      +-SECOND-----+
      +-SECONDS-----+
      +-MICROSECOND--+
      +-MICROSECONDS--+
```

Disclaimer: This Db2® 12 for z/OS Reference Guide was developed to help users in their daily activities in administrating and programming in Db2 for z/OS. There are no guarantees expressed or implied with the contents in this guide. We want to provide a quality and useful reference for users. Please notify us of any mistakes or errors in this reference guide at blogs@bmc.com. Db2 is a registered trademark of the IBM Corporation.