

DB2 Change Accumulation Tool for z/OS V3.1 User's Guide - Tech Doc Updates

Abstract

Updates that apply to DB2 Change Accumulation Tool for z/OS V3.1 User's Guide (SC19-3776-01).

Content

The most recent update is listed first.

Update 1

Date of change: March 2015

Change Description: USS authorization on z/OS required to run DB2 Change Accumulation Tool jobs

Location of update: Requirements

Update:

To run DB2 Change Accumulation Tool jobs, users must be authorized to use USS on the z/OS machine.

Update 2

Date of change: March 2015

Related APAR: PI33494

Change Description: Ability to allocate the OUTPUT DSN on OBIDXLAT when the dataset does not exist

Update:

This enhancement provides DB2 Change Accumulation Tool users with the ability to allocate the OUTPUT DSN on OBIDXLAT when the data set does not exist.

Syntax descriptions

The following new or modified syntax descriptions apply to this enhancement.

XLAT_VSAM

(Default) Specifies the allocation parameters for the VSAM OUTPUT DSN for the OBIDXLAT.

XLAT_DATA_CLASS

This optional keyword is set within the context of the XLAT_VSAM control card and specifies the SMS data class to be used.

XLAT_MGMT_CLASS

This optional keyword is set within the context of the XLAT_VSAM control card and specifies the SMS management class to be used.

XLAT_NOERASE | XLAT_ERASE

These keywords are set within the context of the XLAT_VSAM control card:

XLAT_NOERASE

This optional keyword specifies that the cluster's components are not to be erased when its entry in the catalog is deleted.

XLAT_ERASE

This optional keyword specifies that the cluster's components are to be erased when its entry in the catalog is deleted.

XLAT_NOREUSE | XLAT_REUSE

These keywords are set within the context of the XLAT_VSAM control card:

XLAT_NOREUSE

This optional keyword specifies that a non re-usable cluster will be defined.

XLAT_REUSE

This optional keyword specifies that a re-usable cluster will be defined.

XLAT_STOR_CLASS

This optional keyword is set within the context of the XLAT_VSAM control card and specifies the SMS storage class to be used.

XLAT_VCAT

This optional keyword is set within the context of the XLAT_VSAM control card and sets the catalog alias, DISP=CATLG. If the XLAT_VCAT keyword is not present, then DISP=KEEP.

XLAT_VOLUMES

This optional keyword is set within the context of the XLAT_VSAM control card and specifies the volumes to be used.

XLAT_VSPACE

This optional keyword is set within the context of the XLAT_VSAM control card and when specified, generates the space allocations of the data set. For example, a typical generated XLAT_VSPACE control card would be:

```
XLAT_VSPACE   'MB(10 10)'
```

or:

```
XLAT_VSPACE   'TRK(15 1)'
```

or:

XLAT_VSPACE 'CYL(10 10)'

XLAT_COPY

When present, this control card specifies the COPY allocation parameters for the OUTPUT DSN OBIDXLAT.

XLAT_CATALOG

This optional keyword is set within the context of the XLAT_COPY control card and sets DISP=CATLG. If the XLAT_CATALOG keyword is not present, then DISP=KEEP.

XLAT_DATA_CLASS

This optional keyword is set within the context of the XLAT_COPY control card and specifies the SMS data class to be used.

XLAT_DEVICE

This optional keyword is set within the context of the XLAT_COPY control card and specifies the 8-character device name.

XLAT_EXP_DATE

This optional keyword is set within the context of the XLAT_COPY control card and specifies the expiration date for the XLAT_COPY data sets.

XLAT_MGMT_CLASS

This optional keyword is set within the context of the XLAT_COPY control card and specifies the SMS management class to be used.

XLAT_RETPD

This optional keyword is set within the context of the XLAT_COPY control card and specifies the retention period for the XLAT_COPY data sets.

XLAT_SPACE

This optional keyword is set within the context of the XLAT_COPY control card and when specified, generates the space allocations of the data set. For example, a typical generated XLAT_SPACE control card would be: XLAT_SPACE 'CYL(10,10),RLSE'.

XLAT_STOR_CLASS

This optional keyword is set within the context of the XLAT_COPY control card and specifies the SMS storage class to be used.

XLAT_VOLUME_COUNT

This optional keyword is set within the context of the XLAT_COPY control card and specifies the maximum number of volumes that can be used for the XLAT_COPY data sets. Valid values are in the range of 1 to 255 or the control card is left out, it defaults to the system default.

DB2 Change Accumulation Tool syntax diagram

The following syntax diagram illustrates how to construct valid DB2® Change Accumulation syntax.

```
>>-CHANGE_ACCUM-- (----->
|
|
V      V      |
>----GROUP--(----| Space Attributes |---| Group Attributes |--)-+-->
|
|
>+-----+-----+-----+-----+----->
'-SWITCH_VCAT--vcatname-' '-NO_SYSCOPY_ROW-'
|
|
.-PARALLEL--'--0--,'--1--'-.
|
|
>+-----+-----+-----+-----+----->
'-PARALLEL--'--x--,'--y--'-' '-CHECK_AFTER_QUIESCE-'
|
|
>+-----+-----+-----+-----+----->
'-NO_REUSE-' '-REPAIR_RECOVER_PENDING-' '-NO_SYSLGRNX-'
|
|
>+-----+-----+-----+-----+----->
'-BUFFERS_IN_31_BIT-'
|
|
>+-----+-----+-----+-----+----->
'-USE_ABOVE_THE_BAR--'primary,secondary,count'-'
|
|
>+-----+-----+-----+-----+----->
'-FORCE_COPIES-' '-CONTINUE_ON_ERROR-'
|
|
.-WRITE_TO_COPIES-.
|
|
+WRITE_TO_VSAM---+ | (1) |
'-WRITE_TO_BOTH---' '-RESTORE_BEFORE--byte string-----'
```


Space Attributes

```
|--SPACE--(--| ML Attributes |----->
>+-----+-----+-----+----->
  +-| OBID Translate |-----+ '-SWITCH_VCAT--vcatname-'
  '-| OBID Translate Indexes |- '
>+--DATA_BASE -database--SPACE_NAME -tablespace--+-----+----->
  |                                                                 '-PARTITION -number-' |
  +-DATA_BASE -database--SPACE_NAME -indexspace--+-----+-----+
  |                                                                 '-PARTITION -number-' |
  '-CREATOR--creator--INDEX -indexname--+-----+-----'
                                         |          (5) |
                                         '-PARTITION -number-----'
>+--TO_CURRENT--+-----+-----+----->
  |              +-UNIFIED-----+ |
  |              '-UNIFIED_WARNING-' |
  +-TO_CONSISTENT_IC--+-----+-----+
  |              +-UNIFIED-----+ |
  |              '-UNIFIED_WARNING-' |
  +-TO_QUIESCE--+-----+-----+
  |              '-(--#n--)-' +-UNIFIED-----+ |
  |                          '-UNIFIED_WARNING-' |
  +-TOLOGPOINT--byte string--+-----+-----+
  |                          +-UNIFIED-----+ |
  |                          '-UNIFIED_WARNING-' |
  +-END_RBA -byte string--+-----+-----+
  |                          +-UNIFIED-----+ |
  |                          '-UNIFIED_WARNING-' |
  '-END_LRSN -byte string--+-----+-----'
                          +-UNIFIED-----+
                          '-UNIFIED_WARNING-'
>+-----+-----+-----+----->
  |              (6) | '-STARTING_IC -'dsn'-'
  '-REBUILD_INDEXES-----'
>+-----+-----+-----+----->
  | (7) |
  '-----IC_LP--(--| Dynamic Allocation Attributes |--)-'
>+-----+-----+-----+----->
  '-IC_LB--(--| Dynamic Allocation Attributes |--)-'
>+-----+-----+-----+----->
  '-IC_RP--(--| Dynamic Allocation Attributes |--)-'
>+-----+-----+-----+----->
  '-IC_RB--(--| Dynamic Allocation Attributes |--)-'
>+-----+-----+-----+-----|
  '-CHECK_AFTER_QUIESCE-' '-NO_REUSE-'
```


OBID Translate

```
|--OBIDXLAT--(--+-----+--XLAT_DSN--'dsn'----->
          '-| XML target |-'
>--+-----+-----+-----+-----+----->
  '-XLAT_IN_DSN--'dsn'-'  '-XLAT_IN_LOGPOINT--'logpoint'-'
>--DBID--'dbid,dbid'--PSID--'psid,psid'----->
.-----
v
>--+-----+-----+-----+-----+----->
  '-XLAT_INCREMENTAL--(--INCR_IN_DSN--'dsn'--INCR_IN_LOGPOINT--'logpoint'--)-'
.-----
v
>--OBID--'obid,obid'--+-)-----|
          |      (12)
```

OBID Translate Indexes

```
|--OBIDXLAT--(--XLAT_DSN--'dsn'--DBID--'dbid,dbid'----->
          (13)
>--PSID--'psid,psid'-----OBID--'obid,obid'----->
          (14) (15)
>--OBID--'obid,obid'--)------|
```

XML dsn info

```
|--XML_JOBS_DSN--'dsn'--XML_JOBS_MEMBER_PFX--'prefix'----->
>--XML_TEMPLATE_DSN--'dsn'--+-----+-----+-----+-----|
          '-XML_TEMPLATE_MEMBER--'member'-'
```

XML target

```
|--XLAT_TARGET_SSID--'ssid'--XLAT_TARGET_DBNAME--'dbname'----->
>--XLAT_TARGET_TSNAME--'tsname'-----|
```

OBID - No Dataset

```
|--OBIDXLAT--(--+-----+-----+-----+-----+-----|
          +-| XLAT_COPY_SPECIFICATION |-+
          '-| XLAT_VSAM_SPECIFICATION |-'
```

XLAT_COPY_SPECIFICATION

```
|--XLAT_COPY--+-----+-----+-----+-----|  
             '-| COPY_SPECIFICATION |-'
```

COPY_SPECIFICATION

```
|-----+-----+-----+-----+----->  
  '-XLAT_CATALOG-' | (16) |  
                    '-XLAT_SPACE--spacespec-----'  
  
>-----+-----+-----+-----+----->  
  '-XLAT_DATA_CLASS--dataclass-'  
  
>-----+-----+-----+-----+----->  
  '-XLAT_MGMT_CLASS--mgmtclass-'  
  
>-----+-----+-----+-----+----->  
  '-XLAT_STOR_CLASS--storclass-'  '-XLAT_DEVICE--device-'  
  
>-----+-----+-----+-----+----->  
  '-XLAT_VOLUME_COUNT--number-'  
  
>-----+-----+-----+-----+-----|  
       | (17) | '-XLAT_RETPD--daycount-'  
  '-XLAT_EXP_DATE--date-----'
```

XLAT_VSAM_SPECIFICATION

```
|--XLAT_VSAM--+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----|  
      '-| VSAM_SPECIFICATION |-'
```

VSAM_SPECIFICATION

```
|--+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+----->  
  '-XLAT_VCAT--catalogname-'  
>--+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+----->  
    |                                             (18) |  
  '-XLAT_VSPACE--vspacespec-----'  
>--+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+----->  
    |                                             (19) (20) |  
  '-XLAT_VOLUMES--volumelist-----'  
>--+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+----->  
  '-XLAT_DATA_CLASS--dataclass-'  
>--+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+----->  
  '-XLAT_MGMT_CLASS--mgmtclass-'  
>--+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+----->  
                                             .-XLAT_NOERASE-.  
  '-XLAT_STOR_CLASS--storclass-'  '-XLAT_ERASE---'  
  
  .-XLAT_NOREUSE-.  
>--+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----|  
  '-XLAT_REUSE---'
```

Notes:

1. All occurrences of the variable 'byte string' in this syntax diagram must be in the format to an X'xxxxxxxxxx', that is, an X followed by a single-quote, followed by 12 hex character, followed by a single-quote.
2. Refer to DB2(r) Change Accumulation Tool syntax for details about the valid values accepted for the IMAGE_COPY_PREFERENCE control card.
3. Refer to DB2(r) Change Accumulation Tool syntax for details about the valid values accepted for the LOG_COPY PREFERENCE control card.
4. Refer to DB2(r) Change Accumulation Tool syntax for details about the valid placement of the REBUILD_INDEXES control card in Change Accum syntax.
5. Note that only GGC Batch supports CREATOR.INDEXNAME. The GGC ISPF always builds the JCL with DATABASE.INDEXSPACE. The GGC ISPF does not build CREATOR.INDEXNAME.
6. Refer to DB2(r) Change Accumulation Tool syntax for details about the valid placement of the REBUILD_INDEXES control card in Change Accum syntax.
7. Coding IC_xx control cards at the SPACE level and JCL DD cards is mutually exclusive with coding mini log data sets at the SPACE or GROUP level. GGC only produces mini logs or image copies for a job step.

8. Refer to DB2(r) Change Accumulation Tool syntax for details about the valid placement of the REBUILD_INDEXES control card in Change Accum syntax.
9. If you specify the MINI_LOG_DSN_* control cards at the GROUP level, you cannot also specify it at the SPACE level or vice versa. The specification of the MINI_LOG_DSN_* control cards at GROUP and SPACE levels is mutually exclusive.
10. The previous control card used to specify the mini log data set name, MINI_LOG_DSN, is functionally identical to MINI_LOG_DSN_1. The online interface will now only generate MINI_LOG_DSN_1 going forward, even if only one mini log data set is specified.
11. Mini log data sets coded either at the SPACE or GROUP level are also mutually exclusive with coding IC_xx control cards at the SPACE level and JCL DD cards. GGC only produces mini logs or image copies for a job step.
12. When specifying the DBID, PSID, and OBID pairs, all pairs should be space separated and the source ID is listed first with the target ID listed second. Each pair should be defined on a new line. Define multiple OBID pairs as necessary.
13. This is the PSID of the Index Space.
14. When performing OBID Translate on indexes, the order in which the OBIDs are specified is significant. OBIDs for indexes should be specified before OBIDs for tables.
15. When specifying the DBID, PSID, and OBID pairs, all pairs should be space separated and the source ID is listed first with the target ID listed second. Each pair should be defined on a new line. Define multiple OBID pairs as necessary.
16. The space specification, spacespec, supports all formats as described in JCL reference, however the [directory]/[index] specification is not supported. For example: XLAT_SPACE '(CYL,(10,10),RLSE)' or XLAT_SPACE '(CYL,10)'
17. The format for date can either be YYYY/DDD or YYDDD.
18. The VSPACE specification, vspacespec, supports all formats as described in IDCAM documentation, however the RECORD specification is not supported. Examples: XLAT_VSPACE 'MB(10)' or XLAT_VSPACE 'MB(10 10)'
19. Examples of volumelist: XLAT_VOLUMES 'F2P108 F2P108 F2P108', XLAT_VOLUMES 'F2P108' and XLAT_VOLUMES F2P108
20. XLAT_VOLUMES can be used to specify between one and 50 volumes

Sample JCL

The following sample JCL illustrates the use of this enhancement:

```
***** Top of Data *****
//GGCWTV1 EXEC PGM=GGC#MAIN,REGION=0000M,
//          PARM=(QAA5)
//*
//SYSUDUMP DD SYSOUT=*
//SYSOUT   DD SYSOUT=*
//INFOM    DD DUMMY                      Log reader info messages
//DB2PARMS DD DSN=XXXXXX.GGC310.DB2CNTL,DISP=SHR
//*
//SR0AMSGS DD SYSOUT=*
//SORAMSGS DD SYSOUT=*
//SR0AWK01 DD UNIT=SYSDA,SPACE=(CYL,(20,1),,ROUND)
//SR0AWK02 DD UNIT=SYSDA,SPACE=(CYL,(20,1),,ROUND)
//SR0AWK03 DD UNIT=SYSDA,SPACE=(CYL,(20,1),,ROUND)
//SORAWK01 DD UNIT=SYSDA,SPACE=(CYL,(20,1),,ROUND)
//SORAWK02 DD UNIT=SYSDA,SPACE=(CYL,(20,1),,ROUND)
//SORAWK03 DD UNIT=SYSDA,SPACE=(CYL,(20,1),,ROUND)
/*
//SYSINGGC DD *
CHANGE_ACCUM (
  GROUP (
    SPACE (
      DATA_BASE  DBAA000A
      SPACE_NAME  TSAA000B
      OBIDXLAT (
        XLAT_DSN  'QDS5.DSNDBC.DBAA000B.TSAB000B.I0001.A001'
        DBID     '000492,000498'
        PSID     '000004,000004'
        OBID     '00022,00022'
        XLAT_VSAM
        (
          XLAT_REUSE
          XLAT_NOERASE
          XLAT_VSPACE      'MB(10 10)'
          XLAT_STOR_CLASS  DB2VSC1S
          XLAT_VOLUMES     'VOL001 VOL002 VOL003 VOL004 VOL005'
        )
      )
    )
  )
  TO_CURRENT
)
NO_REUSE
LOG_COPY_PREFERENCE R1R2A1A2
WRITE_TO_VSAM
USER_INDICATOR GGC
)
/*
***** Bottom of Data *****
```

Message updates

This enhancement includes new messages that alert the user of syntax problems such as invalid syntax or duplicate control cards.