Updates to DB2 Cloning Tool V3.2 User's Guide

Abstract

Updates that apply to DB2® Cloning Tool Version for z/OS® 3.2 User's Guide (SC27-6556-01)

Content

The most recent update is listed first.

Update 8

Date of change: May 2017

Topics: Multiple

Change description: APAR PI79277 adds the option to use data sets that have been created by using the DB2 COPY utility with SHRLEVEL CHANGE and FLASHCOPY CONSISTENT options as the source for table space cloning. The following topics were added or updated:

- Topic: "COPY command syntax"
- Topic: "COPY command and keyword definitions"
- Topic: "COPY command defaults" in the "Using the ISPF Interface" chapter
- Topic: "Messages"

Topic 1: "COPY command syntax"

Add the optional USE-LAST-CONSISTENT-FLASHCOPY keyword under the DATA-MOVER keyword.

Optional keywords

```
[ DATA-MOVER( PGM( ADRDSSU | EMCAPI | SRCIMCPY | NONE )
    [ ,CMDDDNAME( ddname ) ]
    [ ,FASTREP( PREF | REQ | NONE ) ]
    [ ,FCTOPPRCPRIMARY [ (PRESMIRREQ | PRESMIRPREF | PRESMIRNONE ) ]
    [ ,NULLSTORCLASS ]
    [ ,USE-LAST-CONSISTENT-FLASHCOPY( Y | N ) ]
```

Topic 2: "COPY command and keyword definitions"

Add the following description to the Optional keywords.

Optional keywords

```
[ DATA-MOVER( PGM( ADRDSSU | EMCAPI | SRCIMCPY | NONE )
.
.
    [ ,USE-LAST-CONSISTENT-FLASHCOPY( Y | N ) ]
```

USE-LAST-CONSISTENT-FLASHCOPY - This keyword allows you to use data sets that have been created by using the DB2 COPY utility with SHRLEVEL CHANGE and FLASHCOPY CONSISTENT options as the source for cloning. This option enables the target objects to be consistent without stopping the source objects and without the need for applying logs. Also, specifying the USE-LAST-CONSISTENT-FLASHCOPY(Y) keyword avoids rebuilding of indexes that are included in a consistent FlashCopy image copy. Using this option along with multiple subtasks can significantly reduce the CPU usage time and elapsed time of cloning. The USE-LAST-CONSISTENT-FLASHCOPY(Y) keyword is not valid with the DATAMOVER(SRCIMCPY) keyword. If the USE-LAST-CONSISTENT-FLASHCOPY(Y) keyword is specified, then the UNLOAD-LOAD and LOG-APPLY features are automatically switched off.

Note: Specifying this option requires that the version and the object attributes of the source objects are identical to the objects in the consistent FlashCopy image copy.

Topic 3: "COPY command defaults" in the "Using the ISPF Interface" chapter

Add the following:

USE-LAST-CONSISTENT-FLASHCOPY

Enter YES to use data sets that have been created using the DB2 COPY utility with SHRLEVEL CHANGE and FLASHCOPY CONSISTENT options as the source for cloning. This option enables the target objects to be consistent without stopping the source objects and without the need for applying logs. USE-LAST-CONSISTENT-FLASHCOPY (YES) also avoids rebuilding of indexes that are included in a consistent FlashCopy image copy. Using this option along with multiple subtasks can significantly reduce the CPU usage time and elapsed time of cloning.

Important: Specifying this option requires that the version and the object attributes of the source objects are identical to the objects in the consistent FlashCopy image copy.

USE-LAST-CONSISTENT-FLASHCOPY(YES) is not valid with DATAMOVER(SRCIMCPY). If USE-LAST-CONSISTENT-FLASHCOPY is set to YES, the UNLOAD-LOAD and LOG-APPLY features are automatically switched off.

Topic 4: "Messages"

Add the following messages:

CKZ535108W Parameter USE-LAST-CONSISTENT-FLASHCOPY(Y) cannot be used with DATA-MOVER-PGM(*parameter*) and will be turned off.

Explanation: USE-LAST-CONSISTENT-FLASHCOPY is valid only with DATA-MOVER PGM(ADRDSSU), PGM(EMCAPI), or PGM(NONE).

User response: Correct the input and resubmit the job.

CKZ535110W COPY parameter *parameter* has invalid value. Defaulting to *default_value*.

Explanation: The value for the parameter that is listed in the message is not valid. The default value will be used instead.

User response: If the default value for the parameter is acceptable, no action is required. Otherwise, correct the parameter value and resubmit the job.

CKZ535112W Parameter *parameter* cannot be used with USE-LAST-CONSISTENT-FLASHCOPY(Y) and will be turned off.

Explanation: USE-LAST-CONSISTENT-FLASHCOPY(Y) is not valid with the parameter that is listed in the message. The parameter will be turned off.

User response: Correct the parameter and resubmit the job.

CKZ54465E Base | Clone table space *database_name.table_space_name.partition* | *extension number* was not included in any consistent FlashCopy copies.

Explanation: A consistent FlashCopy for the specified table space was not found.

User response: Create a consistent FlashCopy for the specified table space.

CKZ54466W Base | Clone table space database_name.table_space_name.partition | extension number was not included in last consistent FlashCopy. Copy may result in data inconsistencies in target DB2.

Explanation: One or more copied table spaces have newer consistent FlashCopy copies than the specified table space.

User response: If you are sure that using an older consistent FlashCopy for the specified table space will not cause data inconsistencies, no action is required. Otherwise, ensure that consistent FlashCopy copies for all copied table spaces are created within a single COPY utility invocation. Note that if a base/clone relationship between copied table spaces exists, this message will be issued for one of its instances, depending on the copy creation order for base/clone instances.

CKZ54467I Base | Clone index space *database_name.indexspace.partition* | *extension_number* was not included in any consistent FlashCopy copies and will be rebuilt.

Explanation: No consistent FlashCopy copies were found for the specified index space. The specified index space will be rebuilt in the target job.

User response: If you do not want to rebuild the specified index, a consistent FlashCopy for the index must be created along with the related table space. Otherwise, no action is required.

CKZ54468I Base | Clone index space *database_name.index_space_name.partition* | *extension*_number consistent FlashCopy PIT_RBA does not match PIT_RBA of its table space consistent FlashCopy. Index space will be rebuilt.

Explanation: PIT_RBA values for the specified index space and the associated consistent FLASHCOPY for the associated table space are different. The index will be rebuilt to keep the data consistent on the target DB2.

User response: If you do not want to rebuild the specified index, a consistent FlashCopy for the index must be created along with the related table space. Otherwise, no action is required.

CKZ6T169W USE-LAST-CONSISTENT-FLASHCOPY is equal to 'Y'. Therefore the *parameter_name* keyword was set to '*value*'

Explanation: The CPARM parameter file contains either incorrect information or information from the old versions of profiles.

User response: If you changed the CPARM file manually, ensure that it contains accurate information.

CKZ70901I Subtask *subtask_number*, Consistent FLASHCOPY was found for *DB2_data_set_name* in *consistent_FlashCopy_data_set_name* PIT_RBA: *pit_rba_of_consistent_FlashCopy*

Explanation: A consistent FlashCopy for the specified data set was found and will be used as the copy source.

User response: No action is required.

CKZ70902E Subtask *subtask_number*, CKZ00709 internal error. RC=*return_code* RS=*reason_code* INFO=*information_string*

Explanation: An internal error occurred during USE-LAST-CONSISTENT-FLASHCOPY processing.

User response: Contact IBM® Software Support.

CKZ70903I Subtask *subtask_number*, IDCAMS control cards will follow

Explanation: The next set of CKZ70904I messages will contain control cards that are passed to the IDCAMS utility.

User response: No action is required.

CKZ70904I Subtask *subtask_number*, *control_card_contents*

Explanation: This message contains an IDCAMS utility control card.

User response: No action is required.

CKZ70905I Subtask *subtask_number*, IDCAMS output records will follow

Explanation: The next set of CKZ70906I messages will output from the IDCAMS utility.

User response: No action is required.

CKZ70906I Subtask *subtask_number*, *IDCAMS_output_record*

Explanation: This message contains an IDCAMS output record.

User response: No action is required.

CKZ70907E Subtask *subtask_number*, IDCAMS has returned non-zero RC: *return_code*

Explanation: The IDCAMS utility returned a non-zero return code that is listed in the message.

User response: Refer to the CKZ70906I messages to determine the reason of IDCAMS failure. If unable to determine or correct the problem, contact IBM® Software Support.

CKZ70908I Subtask *subtask_number*, Data component name does not conform to DB2 naming conventions. IDCAMS ALTER will be called to fix it. Cluster: *cluster* Data: *data*

Explanation: Copying from consistent FLASHCOPY data sets may result in target DB2 data sets with data component names that do not correspond to DB2 naming conventions. This can lead to various DB2 errors. IDCAMS ALTER will be called to rename these data sets.

User response: No action is required.