

# BACKOUT Functions

Data protection information in the form of *before* and *after* images of all updated records is written to the protection log during each Adabas session. This information is needed to remove or reapply updates.

The protection log may be assigned to a sequential data set or to a dual/multiple protection log data set (direct access) on disk. If the dual/multiple protection log is used, the ADARES PLCOPY function must be used to copy it to a sequential data set. This data set can be used as input to ADARES BACKOUT or REGENERATE.

Software AG does not recommend the use of 3480/3490 tape cartridge compression (IDRC) for protection log files. The ADARES utility BACKOUT function runs at least twice as long under z/OS when processing compressed data. Also, the BACKOUT function is not supported for compressed data on z/VSE systems.

The ADARES BACKOUT {DPLOG | MPLOG} function is not valid for a cluster database. This is not allowed because a merged PLOG is required in order to perform the BACKOUT.

- BACKOUT                                      Back Out Updates Using the Sequential Protection Log (SIBA)
- BACKOUT DPLOG or MPLOG    Back Out Updates Using the Dual or Multiple Protection Log

## BACKOUT Function Statistics

File processing statistics from ADARES BACKOUT function processing are provided at the end of the run. These statistics include the number of data storage records backed out for each file as well as information about the PLOG blocks read and sent, the commands and transactions processed, the number of Adabas calls processed (including maximum and average calls processed in parallel), and the average record buffer size. The statistics are gathered via 4-byte counters that keep count of the total data storage updates for each file during backout processing.

Spanned records and records with large object (LB) fields can span more than one data storage block. Thus an update to a record of this type will increment the data record update counter by one for each data storage block. For example, suppose a spanned record is updated that is stored across three data storage blocks. In this case, the record update counter is incremented three times, one for each data storage block.

Data storage records that were modified in a transaction that did not successfully terminate with an ET command are counted, even though they are backed out by the nucleus.

The following is a sample of an ADARES BACKOUT report (when MTR=YES):

**Note:**

The number of records listed as "Data Record Updates" is the number of data storage records processed; the number of records listed as "PLOG Records sent to ADABAS" is the number of input records from the protection log (PLOG). The PLOG record count is usually much larger than the data record update count.

```
(BACKOUT) File Processing Statistics
-----
I  File Number      I  Data Record Updates  I
I-----I-----I
I      10           I           127           I
-----
```

## Multi-Threading Processing Statistic

```

-----
PLOG Blocks Read from Input          17
PLOG Records Sent to ADABAS         405
Commands Processed                   158
Transactions Processed                28
Number of ADABAS Calls               28
Maximum Calls in Parallel            23
Average Calls in Parallel             10
Average Record Buffer Size           1574

```

The following is a sample of an ADARES BACKOUT report when MTR=NO:

## (BACKOUT) File Processing Statistics

```

-----
I  File Number  I  Data Record Updates  I
I-----I-----I
I      10      I          127      I
-----

```

ADARES (BACKOUT) Normal end: 17 blocks / 405 records processed.