

Optimizing Block Sizes

The time for moving or reading blocks into or out of the cache structure depends on the device type (block size) in use:

- Small block sizes are moved synchronously to and from the cache structure.
- Larger block sizes may be moved asynchronously. Asynchronous moves take much longer and always require more CPU time than synchronous requests.

Although earlier versions of Adabas often worked well with large block sizes, the buffer pool manager and forward index compression feature introduced with Adabas version 7 make smaller block sizes more attractive, especially in data-sharing mode.

Use the following guidelines when selecting an optimal block size for ASSO and DATA:

Note:

Only general recommendations can be given.

1. Avoid 4-byte RABNs

If the database is not extremely large, avoid 4-byte RABNs as this increases the number of AC blocks by 33%. When growth considerations are taken into account, this may require larger block sizes or limit reductions in block size. The same holds true for the maximum compressed record length.

2. Use forward index compression

Forward index compression can significantly reduce the number of index blocks in a database. Apply forward index compression to all frequently accessed files (or to all files, regardless of their frequency of use). Choose the ASSO block size that is as small as possible but large enough to keep the number of index levels down to 3 or 4.

3. Minimize frequently updated descriptors

When files are updated frequently, the number of blocks that are modified and need to be written to the cache structure often depends on the number of descriptors that have been defined and modified during update processing. Support for additional keys whose descriptor values are subject to frequent modifications becomes even more expensive in a data-sharing environment.