

Minimizing Communication with the Coupling Facility

Most of the additional processing required for Adabas sysplex environments compared to a single Adabas nucleus involves communication with the coupling facility (CF).

For this reason, optimizing the performance of an Adabas sysplex environment means minimizing the need to communicate with the CF. It is also important to keep the time required for each communication as short as possible.

This chapter covers the following topics:

- Avoiding the Hold Option
 - Reducing Direct Interaction with the Coupling Facility
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Avoiding the Hold Option

Lock requests usually depend on application requirements. Under data-sharing, the hold option is more expensive and access with the hold option should be avoided unless records will in fact be updated or must be protected from concurrent updates.

Reducing Direct Interaction with the Coupling Facility

Cache requests occur when blocks

- that are referenced do not exist in a local buffer pool;
- exist in the local buffer pool but have become invalid due to concurrent updates from other cluster members or from directory reuse; or
- are updated.

The first and second situation require registering and (re)reading the blocks from the cache. This is much more expensive than validating blocks, which does not require direct interaction with the CF.

The first situation is related to the buffer efficiency in a noncluster environment. In a cluster environment, the buffer efficiency represents the combined effect of the local buffer pool and the cache structure. In order to reduce the interaction with the cache structure, the local buffer pool (LBP) should not be decreased from what would be used in a noncluster nucleus. A large LBP parameter and the usage of forward index compression are recommended to improve the buffer efficiency in the local buffer pool.

Tuning measures to avoid I/Os and cache requests are even more important under data-sharing. Very large LBP and the use of forward index compression are recommended to improve the buffer efficiency in the local buffer pools.