Required Environment

Adabas Cluster Services requires a parallel sysplex environment.

Note:
Siemens HIPLEX is not supported.

This chapter covers the following topics:

- Parallel Sysplex System
- Coupling Facility
- XCF and XES services
- Performance Recommendations

Parallel Sysplex System

One or more z/OS operating system images defined as members of a parallel sysplex are required that are:

- connected with an IBM Sysplex Timer™, and
- connected to a coupling facility, and
- running z/OS or z/OS.e (any version supported by IBM)

* Support for z/OS.e is currently restricted to client programs executing in batch or under TSO or Com-plete.

Coupling Facility

The coupling facility configuration must have sufficient resources to support the cache and lock structures used by Adabas Cluster Services. You can duplex these structures, if at least two coupling facilities are available. Adabas Cluster Services can coexist without restriction with other coupling facility users such as GRS Star.

Each Adabas Cluster Services database uses one cache structure and one lock structure. For each, you must define all of the following in the coupling facility resource management (CFRM) policy:

- the name of the structure (NAME)
- the structure size (SIZE or INITSIZE)
- the preference list of one or more coupling facilities where the structure should be allocated (PREFLIST).

You can also allow duplexing (DUPLEX) or dynamic reallocation (ALLOWREALLOCATE) of either structure.

XCF and XES services

Adabas Cluster Services uses parallel sysplex XCF (Cross-System Coupling Facility) services for intracluster communication and XES (Cross-System Extended Services) for intracluster data sharing. Entire Net-Work may also use XCF services. XCF and XES must be available and functioning at all times for Adabas Cluster Services to operate smoothly.

Performance Recommendations

The inherent necessity to synchronize and share data across system boundaries makes it a challenge for Adabas Cluster Services to perform as well or better than the base Adabas, especially when measured by CPU consumption. Adabas Cluster Services performance is best when the following recommendations are applied:

- The coupling facility processors (CFCPs) should be at least as fast as the central processors running Adabas Cluster Services and they should have sufficient capacity to avoid delays in the execution of coupling facility requests.
- The coupling facility link speed should match the coupling facility processor speed.
- The buffer efficiency in a cluster nucleus when functioning as a non-cluster nucleus should be equal to or greater than 50.
- The buffer pool size (LBP) used for a cluster nucleus should not be lower than when the nucleus is functioning as a non-cluster nucleus.
- The rate of throwbacks due to ISN contention should not be greater than two percent (2%).
- The size of the cache and lock structures specified in the coupling facility resource management (CFRM) policy should be appropriate. For more information, read *Optimizing Lock and Cache Structures in the Coupling Facility* .

  You may use the cache and lock structure size calculators provided for Adabas Cluster Services in Adabas Online System to estimate adequate structure sizes. For more information about these calculators, read *Estimating Sizes for the Cache Structure in a Cluster Environment* and *Estimating Sizes for the Lock Structure in a Cluster Environment*.

Performance measurements of Adabas Cluster Services in a test environment may yield inconclusive results if these recommendations are not followed.