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

- Processors

- Coupling Facility

- Coupling Facility Channels

- XCF Communication

- COUPLExx Parmlib Member

- Performance Recommendations

Parallel Sysplex System

One or more operating system images defined as a true parallel sysplex are required

- connected with an IBM Sysplex Timer ^{TM} ; and

- connected to a coupling facility; and

- running OS/390, z/OS, or z/OS.e (see the *Release* Notes for information about supported versions and release levels).

Processors

Processors (CECs) with a level equal to or greater than G4 are required.

Coupling Facility

The environment required for the coupling facility includes the following IBM or equivalent components

- 9674 coupling facility under PR/SM

- 711 model ES9000 running in an LPAR under PR/SM

- 9672 E, P, or R models

The coupling facility configuration must have sufficient resources to support the cache and lock structures used by Adabas Cluster Services. Additional resources may be needed if XCF is configured to use the coupling facility. A coupling facility and links equal to or greater than G4 are highly recommended for performance reasons.

Adabas Cluster Services can coexist without restriction with other coupling facility users such as GRS Star.

Coupling Facility Channels

Each OS/390 or z/OS system that needs access to the sysplex coupling facility must be connected with at least one coupling facility channel, whether the system runs on the same processor as the coupling facility central processor (CFCP) or on a separate processor.

Channel Path Attachments

As part of the I/O configuration definitions for each coupling facility channel, you need to define the channel path attachments for all processors and coupling facility channels.

1. Connect the coupling facility to the processors in the sysplex.

2. When defining the coupling facility, you should dedicate one or more central processors (CPs) to the partition that runs the CFCP.

3. The CFCP does not support dynamic I/O reconfiguration or PR/SM LPAR reconfiguration. To activate configuration changes, you must power-on reset (POR) the processor that runs the CFCP.

4. Define channel paths for both the coupling facility channel attachment to the processor and the coupling facility channel attachment to the coupling facility. For each system in the sysplex, you can use the HCD panels to define the I/O configuration dataset (IOCDS) that must include definitions for the coupling facility channel paths.

XCF Communication

Adabas Cluster Services uses parallel sysplex XCF services for internucleus communication. Entire Net-Work may also use XCF services.

XCF services may be provided using

- dedicated channel-to-channel (CTC) links;

- coupling facility links; or

- both.

COUPLExx Parmlib Member

You must specify a COUPLExx parmlib member in SYS1.PARMLIB for each system in the sysplex. The COUPLExx member defines the following values:

- Sysplex name, sysplex COUPLExx dataset names, and other COUPLExx dataset names.

- Failure detection interval, operator notification interval, and cleanup interval.

- Default message buffer space, default message size for a signalling path, and local message buffer space.

- Transport classes.

- Outbound and inbound signalling paths.

- Default retry limit.

Performance Recommendations

- The coupling facility processors (CFCPs) must be as fast or faster than the sysplex processors (CECs).

- The coupling facility link speed must match the coupling facility processor speed; for example, use ISC links for G4 speeds; ICB or IC links for G6 speeds.

- Buffer efficiency in a cluster nucleus when functioning as a non-cluster nucleus should be equal to or greater than 50.

- The rate of throwbacks due to ISN contention should be equal to or less than 2%.

- The LBP size used for a cluster nucleus when functioning as a noncluster nucleus should not be decreased when the nucleus in used in a cluster.

- The size of the cache and lock structures set in the coupling facility resource management (CFRM) policy must adhere to Software AG recommendations. See section *For List, Cache, and Lock Structures*.