

Configuration Examples

This section provides example configurations of Adabas Fastpath with the Adabas System Coordinator. It guides you through typical configurations using the SYSAFP and SYSCOR administration tools. It is best to read through all the examples in turn because the configuration issues become more complex with each example.

- The Role of the Adabas System Coordinator
 - Single System with Static Clients
 - Multi System with Static Clients
 - Single System with Dynamic Transaction Routing Clients
 - SYSPLEX with Dynamic Transaction Routing Clients
-

The Role of the Adabas System Coordinator

The Adabas System Coordinator is a prerequisite technology for Adabas Fastpath, Vista, Transaction Manager and SAF Security. Traditionally these products have focused their functionality and benefit on Adabas client sessions rather than explicitly on Adabas servers. The type of Adabas session that has been required in the past can be described as "static". Static Adabas client sessions are not able to move from one job to another within the system for load balancing purposes (this is called dynamic transaction routing). However, increasing use and requirement is emerging for Adabas clients to be able to support dynamic transaction routing (DTR). One of the main purposes of the Adabas System Coordinator is to provide transparent DTR support for Adabas Fastpath, Adabas Vista, Adabas Transaction Manager and Adabas SAF Security.

These products always use Adabas System Coordinator services to support their clients. Traditional (static) clients only need to use the default (local) mode of Adabas System Coordinator services. In local mode, the Adabas System Coordinator software is embedded in the application job and provides local support for client sessions. However, DTR clients must use the Adabas System Coordinator daemon services to move client sessions around the system. In daemon mode, the local Adabas System Coordinator software works in conjunction with counterparts in the daemon to make sure the client sessions can be dynamically moved around the system. You must control these options by configuration.

Note:

You may also configure static clients to use daemon services if you wish.

The Adabas System Coordinator daemon also provides another service. The daemon is able to run the Adabas Fastpath Asynchronous Buffer Manager (FASTABM). This is totally separate from the clustered application (DTR) services. The following examples are provided for running Adabas Fastpath with the Adabas System Coordinator:

- Single System with Static Clients

Static client support from the Adabas System Coordinator in local mode. The Adabas System Coordinator daemon is only needed to house the FASTABM service.

- Multi System with Static Clients

Static client support from the Adabas System Coordinator in local mode. The Adabas System Coordinator daemon is only needed to house the FASTABM service.

- Single System with Dynamic Transaction Routing Clients

DTR client support from the Adabas System Coordinator in daemon mode. The Adabas System Coordinator daemon is also needed to house the FASTABM service in each system image.

- SYSPLEX with Dynamic Transaction Routing Clients

DTR client support from the Adabas System Coordinator in daemon mode using the IBM Coupling Facility to enable multi-systems client DTR. The Adabas System Coordinator daemon is also needed to house the FASTABM service in each system image.

Single System with Static Clients

A single system is one in which only one operating system image is used, perhaps in isolation within a larger complex site. In this type of environment, you will need to do the following:

- Obtain a new Node ID from your administrator to use for the Adabas System Coordinator daemon. In this example, Node ID 9001 is used.
- Define the Adabas System Coordinator group. This example shows a group called TESTSING.
- Define the sole member of the Adabas System Coordinator group. In this example, the member is SYSCO1.
- Define the Adabas Fastpath global buffer. This example uses the name SYSCO1.
- Define the job(s) for which Adabas Fastpath optimization is to be in effect. This example uses job CICTSING.

You can perform the required configuration by taking the following steps:

1. In this SYSCOR example the Adabas System Coordinator group name is TESTSING, the SVC is 253, and the system type is Standard (Single System Image). It is not necessary to specify a cluster facility name in this case because this is only required for running in SYSPLEX mode.

```

18:15:54                      Add                      2006-06-06
                      System Coordinator Group Member      C11210M1

                      Group Name: TESTSING      SVC ID: 253__

System Type: X  Standard single-system image...
(Mark one)     There is only one group member.
               - Standard multi-system images - XCF...
                 This enables multiple XCF group members.
               - Standard multi-system images - Net-Work...
                 This enables multiple Net-Work group members.
               - IBM Parallel Sysplex...
                 This enables XCF group and use of the CF to
                 allow dynamic transaction routing in the plex
Cluster Facility Name: _____

Automatic Pool Recovery: Y

Command ==>
          PF1 Help      PF3 Exit      PF5 Add

```

- Now you must define the daemon member of the Adabas System Coordinator group in SYSCOR. There is usually one daemon running in each system image. Obviously in a single system there is only one member required. The name of the member must be the same as the job name to be run, otherwise the parameters will not be located at runtime. In addition to the name you must also specify the (database or) node number in the Software AG network to be used by the daemon member. This node number must not be currently used for any other purpose. In our example the member name will be SYSCO1. The Node ID allocated in this example is 9001. It is entered in the member definition, as shown below in the expanded group:

Note:

The daemon job (SYSCO1) must specify a DDCARD input for **PRODUCT=AFP** and **PRODUCT=CAS**. These identify the services that will operate in the daemon job.

```

18:20:29      ***** A D A B A S  SYSTEM COORDINATOR 8.1.2 *****      2006-06-06
                      - System Coordinator Group Members -      C11260M1

Run-mode: Local
Group Name: TESTSING      Cluster Facility Name:
SVC ID: 253      Operating System: Single

      Member
Purge(P)  Job Name      Node ID
      -      SYSCO10      9010      <== End of List
      _____
      _____

Command ==>
Enter -PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help      Exit  Refr  Upd      Add      Menu

```

- You must now define in SYSAFP the Adabas Fastpath global buffer memory size to be managed by the Asynchronous Buffer Manager (FASTABM) service that will run in the Adabas System Coordinator daemon. There is a fixed relationship between a buffer and the daemon in which it is to run. This is more relevant for sites with multisystem images. You must use the same name as the Adabas System Coordinator Group member name defined above; in this example SYSCO1. The Adabas System Coordinator group and member must have been defined prior to defining the Adabas

Fastpath buffer:

```

18:22:02                2006-06-06
      Add Buffer      F11110MB

      Size(k)      : 4096__

System Coordinator
  Group Name : TESTSING
  Member Name: SYSC010_

(Leave empty to select)

Memory Pool Name: _____
Fixed Memory Addr: 00000000
(Where appropriate, e.g. VM's
DCSS name,BS2000's Memory Pool)

Command ==>
  PF1 Help   PF3 Exit   PF5 Add

```

- Now you must define SYSAFP job parameters for all the client applications that are to use Adabas Fastpath optimization in your system. In this example a standard CICS job with started task name CICTSING. At runtime, this CICS system produces static Adabas clients managed by the local Adabas System Coordinator (without help from the daemon). Default parameter settings are usually sufficient (and can be modified later if necessary), but there are certain parameters that need to be entered so that it is known that Adabas Fastpath is to apply these to the named job. Where optimization is to be applied to a job for the first time, you are asked to add a new set of job parameters in SYSAFP. Here you must first simply identify the job name and the type. The job type allows Adabas Fastpath to assume suitable defaults and be ready to use the correct operating system or TP system interfaces at runtime. In our example, the job name is CICTSING and the type is CICS (not CICS DTR), as follows:

```

18:24:59      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-06
              - Add Client Runtime Control -                          U11310M1

Select (mark one) :

      _ Batch
      _ COM-LETE
      _ CICS (DTR - Dynamic transaction routing)
      X CICS (Standard)
      _ IMS (DTR)
      _ UTM (DTR)
      _ TSO
      _ CMS
      _ TIAM
      _ more choices for type or

      _ API controlled

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help              Exit                                          Menu

```

5. Now you are asked to identify the job name. In this example, you enter CICTSING as the job name.

Here is the example:

```

18:29:45      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-06
              - Add Client Runtime Control -                          U11310M3

Type: CICS
Name: CICTSING (* for default controls for this type)

This is a standard type of runtime.

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit           Add                                           Menu

```

6. Details relevant to the runtime controls are requested and whether any API runtimes are to be specified. Please refer to the Adabas System Coordinator documentation for further details.

Here is the example:

```

18:36:13      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-06
              - System Coordinator Runtime Controls -                  U11310M5

Operation mode (mark one):
Type: CICS      Use normal autodetect approach: X
Name: TESTSING  Enable COR even if no products: _
                  Disable all products including COR: _

General Settings
Estimated Client Sessions: 1000_____ API runtime overrides...: N (Y/N)
Memory pool extents (k)...: 256_

Maximum idle time (sec)...: 3600_____ Non-terminal idle time.: _____
Generate RSP009/79 (Y/N)...: Y (until 0_____ seconds elapse)

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit           Add                                           Menu

```

7. Now you are asked to identify the Adabas System Coordinator group containing the daemon member(s) that house the Adabas Fastpath buffer (FASTABM) service. You only identify the group, not the member, because doing so allows sites with multisystem images to run jobs in any system and to dynamically receive the optimization benefits made available by the Adabas Fastpath buffer that is available in that local system. In this example, you enter TESTSING in the buffer group name entry.

Here is the example:

```

18:40:50      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-06
              - Adabas Fastpath Runtime Controls -                      U1132FM2

Name: CICTSING
Type: CICS

Fastpath ON/OFF for Job: ON

Using Group Name: TESTSING (Leave empty to select)

Please add Job Parameter details for Fastpath
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit           Upd                               Menu

```

Multi System with Static Clients

A multisystem is one in which multiple operating system images are used in conjunction with each other. To do this, these images must be connected by Software AG's Entire Net-Work product. In these cases, it is likely that an Adabas Fastpath buffer is to be tasked with caching data from Adabas servers where one (or more) nucleus instances run in connected system images. This configuration means modifications occur to Adabas that are not automatically visible to all the Adabas Fastpath buffers running in all the system images. In this case, you must configure Adabas Fastpath and the Adabas System Coordinator daemon so that they are able to freely communicate this type of information when necessary.

The example will use IMAGE1 and IMAGE2. Only static clients are used, so the local Adabas System Coordinator does not need the help of the daemon to manage its client sessions. The daemon is used solely to house the FASTABM service. Each connected system image must run its own instance of the Adabas System Coordinator daemon.

Here are the steps that you take:

- Define a Adabas System Coordinator group, for example, TESTMULT.
 - Acquire/allocate a Node ID for each member (one per image), for example nodes 9010 and 9011 for systems IMAGE1 and IMAGE2.
 - Define a member of the group for each system image, for example, SYSCO10 and SYSCO11.
 - Define an Adabas Fastpath global buffer for each member (image) where a FASTABM service will be implemented. In this example, both images are included and are called SYSCO10 and SYSCO11.
 - Define the static client jobs that are to use Adabas Fastpath, for example, job CICTMULT.
1. Below is the SYSCOR definition of Adabas System Coordinator Group TESTMULT using SVC number 253; the system type is Standard (Multi System Images). Cluster Facility name is not required since this is only required for running in SYSPLEX mode.

Note:

All members of an Adabas System Coordinator group must use the same SVC number at runtime.

```

12:59:47          Add                      2006-06-07
          System Coordinator Group Member    C11210M1

          Group Name: TESTMULT      SVC ID: 253__

System Type: _ Standard single-system image...
(Mark one)   _ There is only one group member.
              X Standard multi-system images - XCF...
              This enables multiple XCF group members.
              _ Standard multi-system images - Net-Work...
              This enables multiple Net-Work group members.
              _ IBM Parallel Sysplex...
              This enables XCF group and use of the CF to
              allow dynamic transaction routing in the plex
              Cluster Facility Name: _____
Automatic Pool Recovery: Y

Command ==>
          PF1 Help          PF3 Exit          PF5 Add

```

2. The following shows the member definitions of the group when it has been expanded in SYSCOR.

Note:

The member names must exactly match the job name of the Adabas System Coordinator daemon.

```

13:01:36      ***** A D A B A S  SYSTEM COORDINATOR 8.1.2 *****      2006-06-07
              - System Coordinator Group Members -                      C11260M1

Run-mode: Local
Group Name: TESTMULT      Cluster Facility Name:
SVC ID: 253              Operating System: Multi

      Member
Purge(P)  Job Name      Node ID
      _      SYSCO10_    9010_      <== Top of List
      _      SYSCO11_    9011_      <== End of List
      _____
      _____
      _____
      _____
      _____
      _____
      _____
      _____
      _____
      _____

Command ==>
Enter -PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help      Exit  Refr  Upd                                Add      Menu

```

3. In this example, an Adabas Fastpath buffer will be run in each system image (one per member). The example below shows the creation of the buffer definition to run as a service in the SYSCO10 member; a similar buffer definition would also be made for SYSCO11.

```

13:02:05                2006-06-07
      Add Buffer      F11110MB

      Size(k)      : 4096__

System Coordinator
  Group Name : TESTMULT
  Member Name: SYSCO10_

(Leave empty to select)

Memory Pool Name: _____
Fixed Memory Addr: 00000000
(Where appropriate, e.g. VM's
DCSS name,BS2000's Memory Pool)

Command ==>
  PF1 Help   PF3 Exit   PF5 Add

Use PF5 to Action or PF3 to Exit

```

4. Below is the view of the second screen for the new Adabas Fastpath job parameters for CICTMULT that will run in the same image as SYSCO10. This is a standard CICS job that does not require daemon mode for dynamic transaction routing. You must identify the Adabas System Coordinator group containing the daemon member(s) that house the Adabas Fastpath buffer (FASTABM) service. You only identify the group, not the member. Doing so allows sites with multisystem images to run jobs in any system and to dynamically receive the optimization benefits made available by the Adabas Fastpath buffer that is available in that local system. In this example, TESTMULT is the Buffer Group Name entry:

```

13:02:58      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-07
              - Add Client Runtime Control -                          U11310M1

Select (mark one) :

      _ Batch
      _ COM-PLETE
      _ CICS (DTR - Dynamic transaction routing)
      X CICS (Standard)
      _ IMS (DTR)
      _ UTM (DTR)
      _ TSO
      _ CMS
      _ TIAM
      _ more choices for type or

      _ API controlled

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit                                           Menu

```

5. Now you are asked to identify the job name. In this example, you enter CICTSING as the job name.

Here is the example:

```

18:29:45      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-06
              - Add Client Runtime Control -                               U11310M3

Type: CICS
Name: CICTMULT (* for default controls for this type)

This is a standard type of runtime.

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit           Add                                     Menu

```

- Details relevant to the runtime controls are requested and whether any API runtimes are to be specified. Please refer to the Adabas System Coordinator documentation for further details.

Here is the example:

```

18:36:13      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-06
              - System Coordinator Runtime Controls -                       U11310M5

Type: CICS
Name: TESTMULT

Operation mode (mark one):
Use normal autodetect approach: X
Enable COR even if no products: _
Disable all products including COR: _

General Settings
Estimated Client Sessions: 1000_____ API runtime overrides...: N (Y/N)
Memory pool extents (k)...: 256_

Maximum idle time (sec)...: 3600_____ Non-terminal idle time.: _____
Generate RSP009/79 (Y/N)...: Y (until 0_____ seconds elapse)

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit           Add                                     Menu

```

- Now you are asked to identify the Adabas System Coordinator group containing the daemon member(s) that house the Adabas Fastpath buffer (FASTABM) service. You only identify the group, not the member, because doing so allows sites with multisystem images to run jobs in any system and to dynamically receive the optimization benefits made available by the Adabas Fastpath buffer that is available in that local system. In this example, you enter TESTSING in the buffer group name entry.

Here is the example:

```

18:40:50      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-06
              - Adabas Fastpath Runtime Controls -                      U1132FM2

Name: CICTMULT
Type: CICS

Fastpath ON/OFF for Job: ON

Using Group Name: TESTMULT (Leave empty to select)

Please add Job Parameter details for Fastpath
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit           Upd                               Menu

```

Single System with Dynamic Transaction Routing Clients

The following are examples of technologies that offer dynamic transaction routing (DTR) in a single system image:

- CICS/MRO
- IMS TM
- UTM

Note:

The activation and use of DTR in the technologies listed above is under the control of the system administrator. You may be able to use these technologies without necessarily using DTR. Please be sure to check.

DTR is the most flexible implementation of load balancing and fault tolerance for these technologies. This is where multiple jobs run together to provide a single service. We refer to DTR-enabled technologies as clustered applications. Clustered applications allow client sessions to move from running in one job to another (within the same service) at any time a message pair completes. Consequently, Adabas Fastpath, Adabas Vista, Adabas Transaction Manager and Adabas SAF Security must all be ready to react to this event, on demand. The Adabas System Coordinator provides an internal service to enable DTR support for these products.

Here are the steps that you take if you wish to use Adabas Fastpath optimization in DTR jobs within a single system:

- Define an Adabas System Coordinator group, for example, TESTDTR.
- Acquire/allocate a Node ID for the daemon, for example, 9020.
- Define the member of the group, for example, member SYSCO20.

- Define an Adabas Fastpath global buffer for the member (image). This must be named SYSCO20.
 - Define the client jobs that are to use Adabas Fastpath, for example, job CICS DTR* that includes job names CICS DTR1 and CICS DTR2 that run together as a single DTR service.
1. Below is the definition of Adabas System Coordinator Group TESTDTR using SVC number 253. The System Type is Standard (Single System Image). Cluster Facility name is not required since this is only required for running in SYSPLEX mode:

13:10:11	Add	2006-06-07
System Coordinator Group Member		C11210M1
Group Name: TESTDTR_ SVC ID: 253__		
System Type: X Standard single-system image...		
(Mark one) There is only one group member.		
- Standard multi-system images - XCF...		
This enables multiple XCF group members.		
- Standard multi-system images - Net-Work...		
This enables multiple Net-Work group members.		
- IBM Parallel Sysplex...		
This enables XCF group and use of the CF to allow dynamic transaction routing in the plex		
Cluster Facility Name: _____		
Automatic Pool Recovery: Y		
Command ==>		
PF1 Help	PF3 Exit	PF5 Add

2. The following shows the example member definition for the group expanded in SYSCOR:

Note:

The started task for the SYSCO DAEMON will specify a DD CARD parameter **PRODUCT=AFP**, as well as **PRODUCT=CAS**. This is because the SYSCO daemon will host the service for the Adabas Fastpath ABM. The Node ID reserved for the SYSCO Daemon is 9020.

```

13:10:55      ***** A D A B A S   SYSTEM COORDINATOR 8.1.2 *****      2006-06-07
                - System Coordinator Group Members -                      C11260M1

Run-mode: Local
Group Name: TESTDTR                      Cluster Facility Name:
SVC ID: 253                             Operating System: Single

      Member
Purge(P)  Job Name      Node ID
      -      SYSC020_      9020_      <== End of List
      _____
      _____
      _____
      _____
      _____
      _____
      _____
      _____
      _____
      _____

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help      Exit  Refr  Upd                      Add      Menu

```

3. In this example, an Adabas Fastpath buffer is run in the Adabas System Coordinator member. The example below shows the definition of a new buffer to run as a service in member SYSC020.

```

13:11:21      2006-06-07
      Add Buffer      F11110MB

      Size(k)      : 4096__

System Coordinator
Group Name : TESTDTR_
Member Name: SYSC020_

(Leave empty to select)

Memory Pool Name: _____
Fixed Memory Addr: 00000000
(Where appropriate, e.g. VM's
DCSS name,BS2000's Memory Pool)

Command ==>
      PF1 Help      PF3 Exit      PF5 Add

```

4. The following shows the second screen during the addition of a new job parameter for all the CICS/MRO jobs that are to run together as a single (clustered) DTR service. The "*" wildcard is used to reduce the number of job definitions required. The Adabas Fastpath optimization is based upon the Adabas System Coordinator group used to house the Adabas Fastpath buffer service. In this case, TESTDTR is used as the buffer group name.

Clustered applications that operate as a DTR service must be defined to run in daemon mode. Therefore, CICS DTR is entered as the common service name, and the Adabas System Coordinator group TESTDTR is also identified (this must be the same as the buffer group name above):

Note:

It is important that all jobs of the same service have an identical setting for Clustered Application Service Name, especially when the wildcard option is not used. This is the only thing that relates jobs together as a single service.

```
13:12:01      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-07
                  - Add Client Runtime Control -                          U11310M1

Select (mark one) :

      _ Batch
      _ COM-PLETE
      X CICS (DTR - Dynamic transaction routing)
      _ CICS (Standard)
      _ IMS (DTR)
      _ UTM (DTR)
      _ TSO
      _ CMS
      _ TIAM
      _ more choices for type or

      _ API controlled

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit                                           Menu
```

5. Now you are asked to identify the job name. In this example, you enter CICTDTR as the control name.

Here is the example:

```

13:12:47      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-07
              - Add Client Runtime Control -                               U11310M4

```

```

Type: CICS (DTR)
Name: CICTDTR_

```

This is a complex type of runtime which is capable of running in basic mode and in DTR mode.

You must define a System Coordinator group (and its members) with PRODUCT=DTR AND the member(s) of that group must be executing in order to achieve DTR capability, otherwise it is ignored.

The name specified above is a unique name for the runtime controls for the DTR service (it is not a jobname). You must also use the 'Expand' line command to enter the list of all jobs in the service.

Command ==>

```

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit           Add                                   Menu

```

- Details relevant to the runtime controls are requested and whether any API runtimes are to be specified. Please refer to the Adabas System Coordinator documentation for further details.

Here is the example:

```

13:15:23      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-07
              - System Coordinator Runtime Controls -                       U11310M5

```

```

Type: CICS (DTR)
Name: CICTDTR_

Operation mode (mark one):
  Use normal autodetect approach: X
  Enable COR even if no products: _
  Disable all products including COR: _

General Settings
  Estimated Client Sessions: 1000_____ API runtime overrides...: N (Y/N)
  Memory pool extents (k)...: 256_____ Group.....: TESTDTR_

  Maximum idle time (sec)...: 3600_____ Non-terminal idle time.: _____
  Generate RSP009/79 (Y/N)..: Y (until 0_____ seconds elapse)

```

Command ==>

```

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit           Add                                   Menu

```

- Now you are asked to identify the Adabas System Coordinator group containing the daemon member(s) that house the Adabas Fastpath buffer (FASTABM) service. You only identify the group, not the member, because doing so allows sites with multisystem images to run jobs in any system and to dynamically receive the optimization benefits made available by the Adabas Fastpath buffer that is available in that local system. In this example, you enter TESTDTR in the buffer group name entry.

Here is the example:

```

13:16:29      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-07
                - Adabas Fastpath Runtime Controls -                      U1132FM2

Name: CICTDTR
Type: CICS (DTR)

Fastpath ON/OFF for Job: ON

Using Group Name: TESTDTR_ (Leave empty to select)

Please add Job Parameter details for Fastpath
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit           Upd                               Menu

```

SYSPLEX with Dynamic Transaction Routing Clients

CICS in a Parallel Sysplex is an example of a technology that offers dynamic transaction routing (DTR) in a Clustered Operating System running in multiple images.

Note:

The activation and use of DTR in these technologies is under the control of the system administrator. You may be able to use these technologies without necessarily using DTR. Please be sure to check.

DTR is the most flexible implementation of load balancing and fault tolerance for these technologies. This is where multiple jobs run together to provide a single service. We refer to DTR-enabled technologies as clustered applications. Clustered applications allow client sessions to move from running in one job to another (within the same application service) at any time a message pair completes. Consequently, Adabas Fastpath, Adabas Vista, Adabas Transaction Manager and Adabas SAF Security must all be ready to react to this event, on demand. The Adabas System Coordinator provides an internal service to enable DTR support for these products.

In a SYSPLEX configuration it is possible for a client session to be routed from one system image to another within the SYSPLEX. In order to facilitate this DTR, the Clustered Application Service running in the Adabas System Coordinator daemons must communicate in order to negotiate the transfer of the client session context from one system image to the other. This system level communication is assisted by use of the IBM Coupling Facility.

Here are the steps that you take if you wish to use Fastpath optimization in DTR jobs within a SYSPLEX:

- Define a Cache Structure in the Coupling Facility, for example, TESTMDTR-CFN.
- Define an Adabas System Coordinator group, for example, TESTMDTR.
- Acquire/allocate a Node ID for each member, for example, nodes 9030 and 9031.
- Define the member of the group, for example, members SYSCO30 and SYSCO31.
- Define an Adabas Fastpath global buffer for the member (image). This must be named SYSCO30.
- Define the client jobs that are to use Adabas Fastpath. In the example, SYSPLEX DTR with jobs CICMDTR1 and CICMDTR2 working together as a single service.

1. Below is the SYSCOR definition of Adabas System Coordinator Group TESTMDTR using SVC number 253; the System Type is SYSPLEX (IBM Parallel Sysplex). The IBM Coupling Facility is used in this configuration. In the example, this is a cache structure called TESTMDTR-CFN. Your system administrator must define the actual structure, too:

13:25:19	Add	2006-06-07
System Coordinator Group Member		C11210M1
Group Name: TESTMDTR SVC ID: 253__		
System Type: _	Standard single-system image...	
(Mark one)	There is only one group member.	
_	Standard multi-system images - XCF...	
	This enables multiple XCF group members.	
	Standard multi-system images - Net-Work...	
	This enables multiple Net-Work group members.	
X	IBM Parallel Sysplex...	
	This enables XCF group and use of the CF to	
	allow dynamic transaction routing in the plex	
	Cluster Facility Name: TEST-CFN_____	
Automatic Pool Recovery: Y		
Command ==>		
PF1 Help	PF3 Exit	PF5 Add

2. The following shows the member definitions of the expanded group in SYSCOR.

Note:

The member names must exactly match the job name of the Adabas System Coordinator daemon.


```

13:30:47      ***** A D A B A S   SYSTEM COORDINATOR 8.1.2 *****      2006-06-07
              - System Coordinator Group Members -                        C11260M1

Run-mode: Local
Group Name: TESTMDTR                      Cluster Facility Name: TEST-CFN
SVC ID: 253                               Operating System: Sysplex

      Member
Purge(P)  Job Name      Node ID
      -    SYSC030_      9030_      <== Top of List
      -    SYSC031_      9031_      <== End of List
      _____
      _____
      _____
      _____
      _____
      _____
      _____
      _____
      _____
      _____

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help      Exit  Refr  Upd                                Add      Menu

```

3. In this SYSAFP example, an Adabas Fastpath buffer is run in each system image (one per daemon member). The screen below shows the definition of the new buffer to run as a service in the member SYSC030. A similar buffer definition would also be made for member SYSC031.

```

13:31:33      2006-06-07
      Add Buffer      F11110MB

      Size(k)      : 4096__

System Coordinator
  Group Name : TESTMDTR
  Member Name: SYSC030_

(Leave empty to select)

Memory Pool Name: _____
Fixed Memory Addr: 00000000
(Where appropriate, e.g. VM's
DCSS name,BS2000's Memory Pool)

Command ==>
  PF1 Help  PF3 Exit  PF5 Add

```

4. The following shows, in SYSAFP, the second screen during the addition of a new job parameter for all the CICS/PLEX jobs that are to run together as a (clustered) DTR service. The "*" wildcard is used to reduce the number of job definitions required. The Adabas Fastpath optimization is based upon the Adabas System Coordinator group used to house the Adabas Fastpath buffer service. In this example, TESTMDTR is used as the buffer group name. Clustered applications that operate as a DTR service must be defined to run in daemon mode. Therefore, CICSMDTR is entered as the common service name, and the Adabas System Coordinator group TESTMDTR is also identified. This must be the same as the buffer group name above.

Note:

It is important that all jobs of the same service have an identical setting for Clustered Application Service Name, especially when the wildcard option is not used. This is the only setting that relates jobs together as a single service.

```
13:12:01      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-07
                  - Add Client Runtime Control -                          U11310M1

Select (mark one) :

      _ Batch
      _ COM-LETE
      X CICS (DTR - Dynamic transaction routing)
      _ CICS (Standard)
      _ IMS (DTR)
      _ UTM (DTR)
      _ TSO
      _ CMS
      _ TIAM
      _ more choices for type or

      _ API controlled

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit                                           Menu
```

5. Now you are asked to identify the job name. In this example, you enter CICTDTR as the control name.

Here is the example:

```

13:12:47      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-07
              - Add Client Runtime Control -                               U11310M4

Type: CICS (DTR)
Name: CICTDTR_

This is a complex type of runtime which is capable of running in basic mode
and in DTR mode.

You must define a System Coordinator group (and its members) with PRODUCT=DTR
AND the member(s) of that group must be executing in order to achieve DTR
capability, otherwise it is ignored.

The name specified above is a unique name for the runtime controls for the
DTR service (it is not a jobname). You must also use the 'Expand' line
command to enter the list of all jobs in the service.

Command ==>
nter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit           Add                                   Menu

```

6. Details relevant to the runtime controls are requested and whether any API runtimes are to be specified. Please refer to the Adabas System Coordinator documentation for further details.

Here is the example:

```

13:33:50      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-07
              - System Coordinator Runtime Controls -                       U11310M5
                                Operation mode (mark one):
Type: CICS (DTR)                                Use normal autodetect approach: X
Name: CICTDTR_                                Enable COR even if no products: _
                                Disable all products including COR: _

General Settings
  Estimated Client Sessions: 1000_____ API runtime overrides...: N (Y/N)
  Memory pool extents (k)...: 256_____ Group.....: TESTMDTR

  Maximum idle time (sec)...: 3600_____ Non-terminal idle time.: _____
  Generate RSP009/79 (Y/N)..: Y (until 0_____ seconds elapse)

Command ==>
nter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit           Add                                   Menu

```

7. Now you are asked to identify the Adabas System Coordinator group containing the daemon member(s) that house the Adabas Fastpath buffer (FASTABM) service. You only identify the group, not the member, because doing so allows sites with multisystem images to run jobs in any system and to dynamically receive the optimization benefits made available by the Adabas Fastpath buffer that is

available in that local system. In this example, you enter TESTMDTR in the buffer group name entry.

Here is the example:

```
13:36:15      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-07
               - Adabas Fastpath Runtime Controls -                      U1132FM2

Name: CICTDTR
Type: CICS (DTR)

Fastpath ON/OFF for Job: ON

Using Group Name: TESTMDTR (Leave empty to select)

Please add Job Parameter details for Fastpath
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit      Upd                               Menu
```