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.
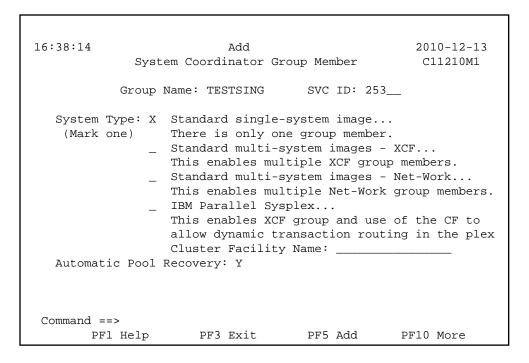
Single System with Static Clients

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.

```
 16:38:14                        Add                       2010-12-13
                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      PF10 More
```

2. 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:
   Here you are identifying the job name (and node number) of each Adabas System Coordinator
   daemon, you are NOT identifying databases or client jobs. 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.

```
 16:40:28     ***** A D A B A S   SYSTEM COORDINATOR 8.2.1 *****      2010-12-13
                   -  System Coordinator Group Members  -          C11260M1
  Run-mode: Local (node 0)
 Group Name: TESTSING                      Cluster Facility Name:
     SVC ID: 253                               Operating System: Single
                    Member
      Purge(P)      Job Name         Node ID
        _           SYSCO1__          9001_
                    _____          _____
                    _____          _____
                    _____          _____
                    _____          _____
                    _____          _____
                    _____          _____
                    _____          _____
                    _____          _____
                    _____          _____
                    _____          _____
                    _____          _____

 No records found for selection
  Command ==>



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

3. 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:

```
 16:42:01               2010-12-13
        Add Buffer    F11110MB


      Size(k)    : 4096__


   System Coordinator
      Group Name : TESTSING
      Member Name: SYSCO1__

 (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. 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:

```
 16:43:29      ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****      2010-12-13
                   -  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 - type 1
                          _ API controlled - type 2




  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:

```
16:44:17      ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****      2010-12-13
                    -  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:

```
 16:40:56      ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****      2011-03-04
                - System Coordinator Runtime Controls  -       U11310M5
                                            Operation mode (mark one):
 Type: CICS                                  Use normal autodetect approach: X
 Name: CICTSING                              Enable COR even if no products: _
                                         Disable all products including COR: _
      Display activities through group: _____
      Refresh activity statistics every.: _____ commands or _____ seconds
      API runtime overrides....: N (Y/N)    Threadsafe operation...: Y (Y/N)
      Use additional exits.....: N (Y/N)
      Maximum idle time (sec)..: 3600_____ Non-terminal idle time.: _____
      Generate RSP009/79 (Y/N).: Y (until 0_____ seconds elapse)
      Runtime messages.........: Y Console message job log (default)
                                 _ Local (DDMSG) file
                                 _ Forward to the Daemon (DDMSG) file
      Latency (mark one).......: _ Disk (crash recoverable)  - requires a group
                                 _ Dataspace  name:         (future)
                                 _ Daemon-side memory       - requires a group
                                 X Local memory   TSQ identity: ____



 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:

```
 16:46:05      ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****      2010-12-13
                   - Adabas Fastpath Runtime Controls  -          U1132FM2

  Name: CICTSING
  Type: CICS


  Fastpath ON/OFF for Job: ON


  Using Group Name: _____   (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.

```
 18:09:00                    Add                    2010-12-13
               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      PF10 More
```

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

   Note:
   Here you are identifying the job name (and node number) of each Adabas System Coordinator daemon, you are NOT identifying databases or client jobs.

```
18:10:18     ***** A D A B A S   SYSTEM COORDINATOR 8.2.1 *****     2010-12-13
                    -  System Coordinator Group Members  -         C11260M1
 Run-mode: Local (node 0)
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.

```
 18:12:01                2010-12-13
        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
```

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:

```
18:12:55      ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****        2010-12-13
                   -  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 - type 1
                           _ API controlled - type 2




 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 CICTMULT as the job name.

    Here is the example:

```
18:14:04      ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****      2010-12-13
                    -  Add Client Runtime Control  -              U11310M3


         Type: CICS
         Name: CICSMULT (* 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:

```
 18:14:43     ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****      2010-12-13
                 - System Coordinator Runtime Controls  -        U11310M5
                                          Operation mode (mark one):
  Type: CICS                                Use normal autodetect approach: X
  Name: CICSMULT                            Enable COR even if no products: _
                                         Disable all products including COR: _
  General Settings
      Statistics externally viewed using group: _____
      Refresh statistics every: _____ commands or _____ seconds
      API runtime overrides....: N (Y/N)    Threadsafe operation...: Y (Y/N)
      Use additional exits.....: N (Y/N)
      Maximum idle time (sec)..: 3600_____ Non-terminal idle time.: _____
      Generate RSP009/79 (Y/N).: Y (until 0_____ seconds elapse)
      Runtime messages        : Y Console message job log (default)
                                _ Local (DDMSG) file
                                _ Forward to the Daemon (DDMSG) file
      Latency controls:   TS queue prefix (blank is default): ____




  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:

```
18:15:21      ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****      2010-12-13
                    -  Adabas Fastpath Runtime Controls  -          U1132FM2

 Name: CICSMULT
 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:
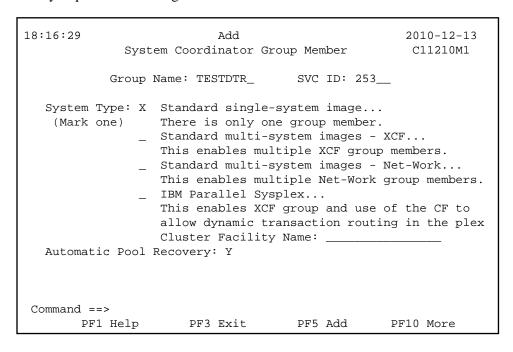
- CICS/MRO

- 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 CICSDTR* that includes job names CICSDTR1 and CICSDTR2 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:

```
18:16:29                    Add                       2010-12-13
             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      PF10 More
```

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

   Note:
   Here you are identifying the job name (and node number) of each Adabas System Coordinator daemon, you are NOT identifying databases or client jobs. The started task for the SYSCO DAEMON will specify a DDCARD 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.

```
18:17:37      ***** A D A B A S   SYSTEM COORDINATOR 8.2.1 *****      2010-12-13
                   -  System Coordinator Group Members  -           C11260M1
 Run-mode: Local (node 0)
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 SYSCO20.

```
18:18:27                 2010-12-13
        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, CICSDTR 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.

```
18:21:33      ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****       2010-12-13
                    -  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 - type 1
                         _ API controlled - type 2




 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:

```
18:21:50      ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****      2010-12-13
                     -  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
```

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:

```
15:23:59      ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****     2011-03-16
                 - 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: _
      Display activities through group: _____  (mandatory)
      Refresh activity statistics every.: _____ commands or _____ seconds
      API runtime overrides....: N (Y/N)    Threadsafe operation...: Y (Y/N)
      Use additional exits.....: N (Y/N)
      Maximum idle time (sec)..: 3600_____ Non-terminal idle time.: _____
      Generate RSP009/79 (Y/N).: Y (until 0_____ seconds elapse)
      Runtime messages.........: Y Console message job log (default)
                                 _ Local (DDMSG) file
                                 _ Forward to the Daemon (DDMSG) file
      Latency (mark one).......: _ Disk (crash recoverable)  - requires a group
                                 _ Dataspace  name:           (future)
                                 X Daemon-side memory       - requires a group
                                   Local memory


 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 select TESTDTR in the buffer group name entry.

Here is the example:

```
18:23:01  Coordinator  2010-12-13
         Group Names  U1COGPM1

      _     RPEGRP1
      X     TESTDTR
      _     TESTMULT
      _     TESTSING



   Mark to Select Group Name

         PF3 Exit
```

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:

```
18:28:10                    Add                     2010-12-13
              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      PF10 More
```

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

   Note:
   Here you are identifying the job name (and node number) of each Adabas System Coordinator
   daemon, you are NOT identifying databases or client jobs.

```
18:29:32     ***** A D A B A S   SYSTEM COORDINATOR 8.2.1 *****     2010-12-13
                    - System Coordinator Group Members  -           C11260M1
 Run-mode: Local (node 0)
Group Name: TESTMDTR                    Cluster Facility Name: TEST-CFN
    SVC ID: 253                               Operating System: Sysplex
                  Member
     Purge(P)     Job Name         Node ID
        _         SYSCO30_         9030_          <== Top of List
        _         SYSCO31_         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
    SYSCO30. A similar buffer definition would also be made for member SYSCO31.

```
 18:30:17                   2010-12-13
         Add Buffer     F11110MB


       Size(k)    : 4096__


  System Coordinator
       Group Name : TESTMDTR
       Member Name: SYSCO30_

 (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.

```
18:31:44      ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****       2010-12-13
                    -  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 - type 1
                         _ API controlled - type 2




 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 CICMDTR as the control name.

   Here is the example:

```
 18:32:21      ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****       2010-12-13
                    -  Add Client Runtime Control  -              U11310M4


          Type: CICS (DTR)
          Name: CICMDTR_


  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
```

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:

```
 15:29:10      ***** A D A B A S   FASTPATH SERVICES 8.2.1 *****      2011-03-16
                - System Coordinator Runtime Controls  -        U11310M5
                                             Operation mode (mark one):
 Type: CICS (DTR)                                  Use normal autodetect approach: X
 Name: CICMDTR_                                    Enable COR even if no products: _
                                            Disable all products including COR: _
      Display activities through group: _____  (mandatory)
      Refresh activity statistics every.: _____ commands or _____ seconds
      API runtime overrides....: N (Y/N)    Threadsafe operation...: Y (Y/N)
      Use additional exits.....: N (Y/N)
      Maximum idle time (sec)..: 3600_____ Non-terminal idle time.: _____
      Generate RSP009/79 (Y/N).: Y (until 0_____ seconds elapse)
      Runtime messages.........: Y Console message job log (default)
                                 _ Local (DDMSG) file
                                 _ Forward to the Daemon (DDMSG) file
      Latency (mark one).......: _ Disk (crash recoverable)  - requires a group
                                 _ Dataspace  name:           (future)
                                 X Daemon-side memory        - requires a group
                                   Local memory


 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 TESTMDTR in the buffer group name entry.

Here is the example:

```
 18:34:53  Coordinator  2010-12-13
          Group Names  U1COGPM1


       _     RPEGRP1
       _     TESTDTR
       X     TESTMDTR
       _     TESTMULT
       _     TESTSING


    Mark to Select Group Name

          PF3 Exit
```