Session Monitoring

This section describes how to obtain and use the buffer statistics available for the active Adabas Fastpath buffer.

- Session Monitoring Menu

- Buffer Information

- Database and File Information

- Job Information

- System Job Information

Session Monitoring Menu

Active Fastpath buffers can be monitored and controlled by selecting option code 2 on the Online Services main menu or by entering the command 2 on the command line.

The Session Monitoring menu is then displayed.

```
18:23:02  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I003) *****  2008-11-21
Run-mode: 17004               - Session Monitoring -            F12000M1


              Code    Service
              ----    ----------------------------
              1       Buffer Information
              2       Database and File Information
              3       Optimized Job Information
              4       System Job Information
              .       Exit
              ----    ----------------------------
         Code ..: _


     Perspective: 17004 A8P17004
         Status: Active
                 Started Nov 21,2008 at 12:32




Command ==>
```

The following fields are provided:

Field	Description
Code	Option code. The following options are available: `1`: display buffer information `2`: display database and file information `3`: display optimized job information `4`: display system job information
ABM Node ID	The Node ID for the buffer being displayed **Note:** You can display buffer information for a different Node ID by entering the corresponding Node ID in this field. **Note:** You can enter a Node ID and press Enter without selecting a code to check the validity of the node.
Status	Indicates whether or not the buffer is active and when it was last started.
Run-mode	The FASTABM/System Coordinator Node ID to which this job is connected or some text that explains why the job is not currently connected. Excluded: Job parameter is not defined. No connection: Client is unable to connect to the ABM. ENQ-J failure: An identical job is already connected. No daemon: The local daemon is not active. ENQ-B failure: Buffer is unavailable (no buffer enq). Missing: A component is missing. Invalid: A component is bad. Error: A problem with the parameters. Disconnecting: The linker has stopped.

Buffer Information

Selecting option code `1` on the Buffer Statistics and Interaction screen invokes the General Information screen.

Note:
You can also access this screen by entering 2.1 on the command line.

```
18:25:15  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I003) *****  2008-11-21
Run-mode: 17004          - General Information  -              F12100MA

  Buffer Type: Global    Name: A8P17004         SVC:  254 DB:  17004
  Connected to:                                 Buffer Status : Active
  Started:   Nov 21,2008  at: 12:32            Ave Memory Val: 29
  Address:   17EAA400 Size(k): 1023            Session Number: 563


--------------------------- Buffer Statistics ----------------------------

     Access Type          Attempts   (3%) <----------Successes  (68%)

     Read-ahead:               438   (1%)                308   (70%)
     Direct:                   815   (2%)                500   (61%)
     RCs:                      177   (0%)                177   (21%)
     Others:                28,301  (97%)

     Total:                 29,731 (100%)                985    (3%)
--------------------------------------------------------------------------



Command ==>
```

The first section of this screen provides general information for the buffer. The following information is provided:

Field	Description
Buffer Type	The buffer type (global, member).
Name	The buffer name.
SVC	The Adabas SVC used for this buffer.
DB	The Adabas database for which this buffer is used to provide optimization.
Connected to	The job to which the buffer is connected.
Buffer Status	Indicates whether or not the buffer is currently active.
Started	The time at which the buffer was last started.
Ave Memory Val ... Session Number	These fields are reserved for Software AG use.

The next section provides the buffer statistics. The following information is provided:

Field	Description
Access Type	Attempts: the percentage of optimization attempts (opimization attempts divided by total number of commands). Successes: the percentage of successful optimization attempts (successful optimization attempts divided by number of optimization attempts).
Read-Ahead	Attempts: the number of read-ahead optimization attempts, and the attempt percentage (read-ahead optimization attempts divided by total number of commands). Successes: the number of successful read-ahead optimization attempts, and the percentage of successful attempts (successful read-ahead optimization attempts divided by read-ahead optimization attempts).
Direct	Attempts: the number of direct access optimization attempts, and the attempt percentage (direct access optimization attempts divided by total number of commands). Successes: the number of successful direct access optimization attempts, and the percentage of successful attempts (successful direct access optimization attempts divided by direct access optimization attempts).
RCs	Attempts is always equal to successes. This is the number of optimized `RCs` that immediately followed a direct access command (without any intervening "next" commands).
Excluded	Attempts: the number of commands which were excluded from optimization, and percentage (number of excluded commands divided by total number of commands). **Note:** For more information on excluded attempts, use PF6.
Total	Attempts: the total number of commands encountered by Adabas Fastpath. Successes: the total number of successful optimization attempts, and the percentage of successful attempts (successful optimization attempts divided by total number of commands).

Pressing PF6 from any of the buffer information screens displays the Excluded Command Analysis screen:

```
18:28:08  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I003) *****  2008-11-21
Run-mode: 17004            -  Excluded Command Analysis  -          F12100ME
               Buffer: Global A8P17004 Node Id: 17004


    Statistics for commands that have optimization potential but were
    unable to be optimized:

         Unsuitable command type:                      124
         Disqualified:                               27235
         Optimization was disabled:                      0
         Multi-fetch was already set:                    0
         Command details exceed Set-id limit:            0
         Record Buffer exceeds the limit:                0







Command ==>
```

This screen displays the following information:

Information	Description
Excluded - Reasons	The total number of commands excluded from optimization for the listed reasons. For more information, see Excluded Commands.

Note:
This same analysis can be displayed for jobs, databases, and files.

Pressing PF9 from any of the buffer information screens invokes the General Parameters screen:

Parameter Display

```
18:31:41  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I003) *****  2008-11-21
Run-mode: 17004           -  General Parameters  -                    F12100MF
              Buffer: Global A8P17004 Node ID: 17004
                                     Initial                  Commands
Main Parameters           Value      Allocation    Peak Usage  Ignored
Size(k)..Min: 1023         1024         1023           24%
Maximum Jobs:                12                         1            0
RB Length Limit:           2048                                      0
Set Length Limit:          1024                                      0
Other------------------------------------------------------------------
Fast cache attempts:         32     Fast set create attempts:  25
Coherence Limit (per sec):   1      Suspension Period (mins):  10
Default pacing rate:         10     Set Concurrency:           2
Freespace Index Entries:     512    Average Item Size:         256
                                    Async coherence messages:  Y
Log every n minutes:         60     Keep for n days:           30
Restart every n Hrs:         0      Restart Time:              24:00
Direct Access:               ON     Read-ahead Processing:     ON
FIND       SX/L1:            ON     READ LOGICAL  L3:          ON
READ PHYSICAL L2:            ON     HISTOGRAM     L9:          ON



Command ==>  _____
```

For description and use of these parameters, see section Adabas Fastpath Parameters.

The following PF keys are available throughout the series of buffer information screens:

PF Key	Name	Function
PF4	Refr	Refreshes the statistics
PF5	Serv	Invokes the function Asynchronous Buffer Services
PF5	Parms	Displays the file parameters for this buffer
PF6	Excl	Displays the Excluded Command Analysis screen
PF6	Look	Invokes AFPLOOK
PF7	Gen	Reverts to the General Information screen
PF9	Parm	Displays the General Parameters screen
PF9	More	Displays the next file or job detail display
PF10	Cntl	Displays details of the master control set for the file
PF10	Conc	Displays set concurrency information
PF10	SysJ	Toggles from the User Job Summary to the System Job Summary screen
PF10	UserJ	Toggles from the System Job Summary to the User Job Summary screen
PF10	Zero	Resets the display counts to zero and automatically refreshes
PF11	Node	Displays the Buffer Statistics menu

Database and File Information

Selecting option code 2 on the Buffer Statistics and Interaction screen, invokes the Database Summary screen.

Note:
You can also access this screen by entering 2.2 on the command line.

For each database, a summary of activity is displayed as shown on the following example screen:

```
18:47:00  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I003) *****  2008-11-21
Run-mode: 17004              Databases from A8P17004 :  17004          F12200MA

Buffer Session: 563          Started: Nov 21,2008  12:32   Size(k): 1023

C   DB SVC   Attempts         Optimized        Set Usage(k)      Status
_   19 240                                                       DB Down
_   198 240      5607             3774                 114       Remote Optimizing




    Totals:           5607 100%       3774 100%           114 100%
  Mark with F(ile),D(etail),S(ervices)



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

The following information is provided on this screen:

Field	Description
Buffer Session	The buffer session number.
Started	The time at which the buffer was last started.
Size	The memory allocation for the buffer.
C	Option code. The following options are available: d: display detailed database information f: display file summary information s: perform database service (stop/start optimization).
DB	The Adabas database.
SVC	The Adabas SVC.
Attempts	The total number of optimization attempts.
Optimized	The total number of successful optimization attempts.
Set Usage	The number of direct access sets used.
Status	The status of the database.

Database Services

If the option code s is selected for a database, the following window is displayed:

```
10:27:51                    2006-05-19
                             F12200MC


       Stop/Start Optimization
       for: Database 198

            S Stop Optimization
            R Start Optimization
            . Exit
      Code..:


 Command ==>
          PF1 Help   PF3 Exit
```

Database Services

Using this window, you can stop/restart optimization for a database.

If database optimization is stopped, no further optimization occurs for its files and sets. In addition, all direct access data is removed from the Adabas Fastpath buffer for sets belonging to files within this database.

Note:
A similar service is available at the file and file set levels.

Detailed Database Information

If the option code d is selected for a database, the Database Details screen is displayed.

This screen contains a performance analysis for the selected database.

```
17:28:30  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I006) *****  2009-08-25
Run-mode: 17004              Database Details from A8P17004 : 17004  F12200MB

                          Database: 17003 SVC: 254


-------------------------- Optimization Summary ---------------------------
      Access Type          Attempts  (98%) <----------Successes  (77%)

      Read-ahead:            18,739  (30%)          13,121  (70%)
      Direct:               33,456  (53%)          25,198  (75%)
      RCs:                   9,569  (15%)           9,569  (28%)
      Others:                  418   (0%)

      Total:                62,182 (100%)          47,888  (77%)
---------------------------------------------------------------------------
      Updates:                       Over-reads:        2,132  (16%)

   Status 1: 40 90 00 A0 Bad Response:     Lock: 00000000  DBE Addr: 1961F530
   ADABAS Vers: 813     Hex: 08010300  Location: 00000000
   DBID from GCB:       Nuc ID:
```

The first section of this screen (Optimization Summary) provides optimization statistics for this database. This information is provided in the same format as that provided at the buffer level (see section Buffer Information). The statistics shown at the database level are exclusively for commands that are eligible for optimization. The excluded count therefore differs from the buffer level count.

The second section of this screen provides the following information:

Field	Description
Updates	The number of update commands processed for this database.
Over-reads	The number of read-aheads performed but not needed by the application, and the percentage of non-needed over-reads to the number of successful read-aheads. Non-needed over-reads represent overhead that may reduce the effectiveness of read-ahead optimization. In general, over-reads should not exceed 25% of read-ahead successes.
Status ... Nuc ID	These fields are reserved for Software AG use.

Excluded Command Analysis

Pressing PF6 on the Database Details screen displays the excluded command analysis for the selected database:

```
18:53:42  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I003) *****  2008-11-21
Run-mode: 17004              Database Details from A8P17004 : 17004  F12200MG

                          Database: 17003 SVC: 254

   Statistics for commands that have optimization potential but were
   unable to be optimized:

         Unsuitable command type:                     20
         Disqualified:                                 0
         Optimization was disabled:                    0
         Multi-fetch was already set:                  0
         Command details exceed Set-id limit:          0
         Record Buffer exceeds the limit:              0




Command ==>
```

The information is provided in the same format as that provided at the buffer level (see section Buffer Information).

Note:
A similar analysis can be displayed from the file detail screen.

Summary File Information

If the option code f is selected for a database, the File Summary screen is displayed.

Note:
You can also access this screen by entering 2.2.1 on the command line.

This screen displays a summary of activity for each file in the selected database.

```
15:20:04  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I003) *****  2008-11-26
Run-mode: 17004              Files from A8P17004 : 17004              F12210MA

                          Database: 17003 SVC 254

 C   File      Attempts        Optimized        Set Usage(k)        Status
 _      7        3674 (64%)     2536 (65%)        15 (13%)         Optimizing
 _     19        2051 (36%)     1347 (35%)        98 (86%)         Optimizing


 Totals:         5725 100%      3883 100%        114 100%
 Mark with D(etail),F(ile Sets),S(ervices)



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

The following information is provided:

Field	Description
C	Option code. The following options are available: d: display detailed database information d: display detailed file information f: display file set summary s: perform file service (stop/start optimization)
File	The Adabas file number.
Attempts	The total number and percentage of optimization attempts.
Optimized	The total number and percentage of successful optimization attempts.
Set Usage	The number and percentage of direct access sets used.
Status	The status of the file (optimizing or not optimizing).

Detailed File Information

If option code d is selected on the File Summary screen, the File Details screen is displayed.

This screen contains optimization performance information for the selected file.

```
17:36:22  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I006) *****  2009-08-25
Run-mode: 17004            File Details from A8P17004 : 17004      F12210MB


                  Database: 17003 SVC 254 File: 9
-------------------------- Optimization Summary --------------------------
     Access Type          Attempts  (98%) <----------Successes  (77%)

     Read-ahead:           18,737  (30%)             13,120  (70%)
     Direct:               33,456  (53%)             25,198  (75%)
     RCs:                   9,569  (15%)              9,569  (28%)
     Others:                  369   (0%)

     Total:                62,131 (100%)             47,887  (77%)
---------------------------------------------------------------------------
     Updates:                             Over-reads:   2,132  (16%)

  Set Limit(k): 2                              Update Sensitivity: R
  Set Id Length Limit: 1024   RB Length Limit: 2048   Set Concurrency: 2
  Status: 00 D0    Last RC:        Next Event:  0:00   Addr: 19626468



Command ==>
```

The first section of this screen (Optimization Summary) provides optimization statistics for the file. This information is provided in the same format as that provided at the database level.

The second section of this screen provides the following information:

Field	Description
Updates	The number of update commands processed for this file.
Over-reads	The number of read-aheads performed but not needed by the application, and the percentage of non-needed over-reads to the number of successful read-aheads. Non-needed over-reads represent overhead that may reduce the effectiveness of read-ahead optimization. In general, over-reads should not exceed 25% of read-ahead successes.
Set Limit ... Set Concurrency	The current settings for various file optimization parameters. For a description of each parameter, see the section Adabas Fastpath Parameters.
Status ... Addr	These fields are reserved for Software AG use.

Pressing PF9 invokes the second File Details screen. This screen shows whether or not optimization has been defined for the Adabas command/descriptor pairs which are used to access the file.

```
10:37:21   ***** A D A B A S  FASTPATH SERVICES 8.1.2 *****           2006-05-19
           -  File Details for File 19 DBID 198 SVC 240  -            F12210ME
                          Expanded File N


                On/Off Adabas Field Overrides      ........Direct Access......
             L1    On
             L3    On
             L9    On
             S1    On
             S2    On


  Over-reads    Default Adabas Field Overrides     ........Read-ahead.........
             L1     On
             L2     On
         34  L3     On
             L9     On
             S1     On
             S2     On
             S8     On
             S9     On



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

File Details 2

The two sections of the screen provide optimization information for direct access and read-ahead commands respectively.

The following information is provided:

Field	Description
Command	Adabas command.
On/Off	Indicates whether or not optimization is in effect for the command.
Adabas Field Overrides	Indicates whether or not Adabas field overrides have been defined.
Over-reads	The number of read-aheads performed but not needed for the command. Non-needed over-reads represent overhead that may reduce the effectiveness of read-ahead optimization. In general, over-reads should not exceed 25% of read-ahead successes.

File Set Summary Information

If the option code f is entered for a file on the File Summary screen, the Set Summary screen is displayed. This screen contains summary information for each Adabas command/descriptor pairing:

Note:
You can also access this screen by entering 2.2.2 on any command line.

Note:
You can also access this screen using PF9 from AFPLOOK File Details or File Parameter Maintenance. In addition, this screen gives hot key access to AFPLOOK (PF6) and File Parameters (PF5). Pressing PF10 displays details of the master control set for the file.

```
15:30:59  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I003) *****  2008-11-26
 Run-mode: 17004              Set Summary from A8P17004 : 17004       F12220MA

                   Database: 17003 SVC 254 File: 9

            Number of Items....              Memory (k)....        Growth
 C CC De Sets     In Use      Peak  Optimized  In Use     Peak      Mode
 _ L1        2         5        24         25       5       27      Low
 _ L3 KK     3        10        32         75      12       39      Low
 _ S1 KK     2        19        40        772       2       21      High
 _ L3 KK     1                   8          5                9



 Mark with D(etail),F(ull Set List)

 Command ==>



Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
     Help            Exit  Refr  Parms Look                 Cntl  Node  Menu
```

The following information is provided:

Field	Description
C	Option code. The following options are available: d: display detailed set information f: display full set list
CC De	The Adabas command/descriptor pair for which information is provided.
Sets	The number of sets that have been added together to make the summary.
Number of Items	The number of items (records) in use at the present time, the peak number of items used, and the number of times items in the set were used for optimization.
Memory	The memory in use to hold the data in the sets (in k) and the peak memory usage for all sets.
Growth Mode	Fastpath regularly assesses the worthiness of all direct-access sets as being high, medium or low. Based upon this assessment Fastpath is likely to award more memory to sets assessed highly, when there is memory available, and to remove memory from the less worthy sets. The regular reassessment means the assessment of a set will quickly change according to current system activity thereby making sure the most appropriate optimization levels are maintained at all times.

File Set List

If the option code f is selected for a command/descriptor pair on the File Set Summary screen, the Set Summary screen will be displayed.

This screen contains an activity summary for each direct access set used by the selected command/descriptor pair.

```
15:33:44  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I003) *****  2008-11-26
Run-mode: 17004             Set Summary from A8P17004 : 17004          F12230MA

             Database: 17003 SVC 254 File: 9    CC: L3 De: KK


            Number of Items......              Memory (k).....         Growth
  C   SSID       In Use       Peak  Optimized  In Use     Peak         Mode
  _      3            4         16         45       4       19         Low
  _      5            6          8         30       7       10         Low
  _      7                       8                         10




  Mark with D(etail),S(start/stop)


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

Sets that are descending are also grouped by command/descriptor pair and these sets are denoted with a "D" following the SSID field.

```
11:51:54  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I006) *****  2010-06-11
 Run-mode: 17004              Set Summary from A8P17004 : 17004        F12230MA

               Database: 17003 SVC 254 File: 9     CC: L3 De: AA


            Number of Items......            Memory (k).....        Growth
 C  SSID        In Use      Peak  Optimized  In Use    Peak         Mode
 _    10 D                    18          1             2



 Mark with D(etail),S(start/stop)

 Command ==>



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

The following information is provided:

Field	Description
C	Option code. The following options are available: d: display detailed set information s: start/stop optimization for the set
SSID	SSID (Short Set ID) is a number used internally to identify different sets. The lower the number, the older the set. If the set is for a descending search (LT, LE) then a "D" will follow the Short Set ID number.
Sets ... Ratings	The remaining fields on this screen are as described in the previous section File Set Summary.

Detailed Set Information

The Set Detail screen can be invoked by selecting the option code d for a set or pressing PF10 on the File Set Summary screen:

```
 15:40:27  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I003) *****  2008-11-26
 Run-mode: 17004              Set Detail from A8P17004 : 17004        F12230MB

                   Database: 17003 SVC 254 File: 9
  Command: L3    Primary Descriptor: KK                 SSID: 3

    Items - Optimized:         45 Added:          15  Collisions:
            Current:            4 Peak:            5   Free:                 12
            Removed:           11 RLU:            11  Overwrites:
                                  Growth Mode: Low    Set Resets:
    Memory - Used(k):           4 Peak(k):        19  Free(k):               1
    Status:   00 C8 0E 08         Expansion:       1  Acc.Mask Entries       1
    Used      FB:     27 RB:   1056 Indexes:       3  Address:        09A00234
    Lengths: SB:      8 VB:     32 Code:              Lock:           00000000
    SetID Length:     47
  Reject:
  SB KK,32,B.
  FB KK,032,B,DD0001-0016,064,B.


  Command ==>




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

The following information is provided:

Field	Description
Growth Mode	Fastpath regularly assesses the worthiness of all direct-access sets as being high, medium or low. Based upon this assessment Fastpath is likely to award more memory to sets assessed highly, when there is memory available, and to remove memory from the less worthy sets. The regular reassessment means the assessment of a set will quickly change according to current system activity thereby making sure the most appropriate optimization levels are maintained at all times.
Items ...	Optimized: the number of successful optimizations from data records in the set. Added: the number of times a data record was inserted into the set. Collisions: the number of times a set was inaccessible because concurrency for the set was exhausted. Current: the number of data records currently in the set. Peak: the highest number of data records which have been in the set. Free: the number of free data item areas currently available. Removed: the number of data records which have been removed from the set. RLU: the number of times an individual data record was removed from the set as a result of a database modification command (for example, update, insert, delete). Overwrites: the number of times a new data record was inserted by overwriting an existing record because no free area was available. Set Resets: the number of times a complete set was emptied.
Memory	The memory in use to hold the data in the sets (in k) and the peak memory usage for all sets.
Status	This field is reserved for Software AG use.
Reject	This field denotes either by text or error number the reason why this set is not (or no longer) operational. See the table below for more information.

Reject Error	Description
Error ID 07	An internal indexing error occurred whilst caching an element.
Error ID 08	An internal indexing error occurred whilst caching an element.
Error ID 09	An internal indexing error occurred whilst caching an element.
Error ID 0A	An internal error occurred whilst tidying up a failed attempt to cache an element.
Error ID 0B	An internal error occurred whilst tidying up a failed attempt to cache an element.
Error ID 0C	An internal error occurred whilst tidying up a failed attempt to cache an element.
Error ID 0E	An internal chaining error occurred during set create.
Error ID 0F	An internal chaining error occurred during set create.
Error ID 12	An internal chaining error occurred during set reset.
Error ID 13	An internal chaining error occurred during set reset.
Error ID 14	An internal memory allocation failure occurred during set reset.

Reject Error	Description
Invalid Search Buffer Syntax	An error was identified in the search buffer syntax.
Invalid Format Buffer Syntax	An error was identified in the format buffer syntax.
Direct Access Set ID Too Long	Set ID length exceeds the limit.
Error ID 18	An internal indexing error occurred in coherence processing.
Error ID 19	An internal indexing error occurred in coherence processing.
Error ID 1A	An internal indexing error occurred in coherence processing.
Variable Length Attribute Forced	The search buffer contains a field that has been forced to be variable length.
Variable Length Attribute Encountered	The search buffer contains a field that has a variable length.
Error ID 1D	An illogical situation has arisen in coherence processing.
Error ID 1F	Internal chaining error occurred during element caching.
Error ID 20	Internal – an attempt was made to cache an element of incorrect size.
L3 or L9 With Superdescriptor Derived From MU/PE Field	Fastpath is unable to support use of superdescriptor derived from MU/PE field.
Complex Search Not Handled	A complex search condition was specified that Fastpath can not handle.
Error ID 25	Internal error in creation of a reposition model during set creation.
Error ID 26	An internal indexing error occurred during element caching.
Error ID 27	An internal indexing error occurred during set creation.
Error ID 28	An internal indexing error occurred during set creation.
Error ID 29	An internal indexing error occurred during housekeeping.
Error ID 2A	An internal indexing error occurred during housekeeping.
Error ID 2B	An internal indexing error occurred during housekeeping.
Search Buffer Field Not In FDT	A field was specified that could not be found in the FDT.
Search Buffer SupDe With Variable Length Parent	Fastpath does not handle search super-descriptors with variable length parents.
Search Buffer Descriptor With Specific Occurrence Number	Fastpath does not handle a search descriptor where a specific occurrence of a periodic group is specified.
Search Buffer Using Invalid Format Character	An unrecognized format character has been specified.
Search Buffer Using Wide Char Descriptor	Fastpath does not handle wide character search descriptors.
Search Buffer Using Variable Length Descriptor	Fastpath does not handle search descriptors of variable length.

Reject Error	Description
Format Buffer Field Not In FDT	A field was specified that could not be found in the FDT.
Format Buffer Found MU/PE	The format buffer contains a series with an MU/PE field.
Format Buffer Is Too Large	Internal Fastpath work areas are not large enough to process the format buffer.

Press PF10 to display set concurrency information.

Job Information

Selecting option code 3 on the Buffer Statistics and Interaction menu, displays the Job Summary screen.

Note:
You can also access this screen by entering 2.3 on the command line.

This screen displays a summary of activity for each job.

```
15:43:45  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I003) *****  2008-11-26
  Run-mode: 17004              Job Summary for A8P17004 : 17004         F12300MA


  Buffer Session: 3            Started: Nov 26,2008  10:25   Size(k): 4096

  C Job Name Number Job Type     Attempts   Optimized Memory(k) Status
  _ DAEFCODE C30694 COM-PLETE        258         194            Active
  _                                                             Unused
  _                                                             Unused
  _                                                             Unused
  _                                                             Unused
  _                                                             Unused
  _                                                             Unused
  _                                                             Unused
  _                                                             Unused
  _                                                             Unused
  _ GXNDCP72 B41763 Batch                                       Disconnected
  _ GXNDCP72 B41766 Batch                                       Disconnected

  Mark with D(etail),S(ervices)



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

The following information is provided:

Field	Description
C	Option code. The following options are available: d: display detailed job information s: stop/start optimization
Job Name Number Type	The job name, job number and job type.
Attempts	The number of optimization attempts.
Optimized	The number of successful optimization attempts.
Memory	Memory used by the job.
Status	The status of the job (active, unused, disconnected). **Note:** Status Disconnected indicates that a job is no longer being optimized, usually because it has completed. The job details can still be displayed until the job area is reused.

Press PF10 to display the System Job Summary screen.

Detailed Job Information

Selecting option code d for a job on the Job Summary screen displays the Job Details screen.

```
17:54:46  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I006) *****  2009-08-25
Run-mode: 17004           Job Details from A8P17004 : 17004       F12300MB

Job:    UKRPE Type: TSO       Number: U27240       Started: Aug 25,2009 13:17

-------------------------- Optimization Summary --------------------------
       Access Type          Attempts (77%) <----------Successes (77%)

       Read-ahead:          18,739 (23%)            13,121 (70%)
       Direct:              33,456 (42%)            25,198 (75%)
       RCs:                  9,569 (12%)             9,569 (28%)
       Others:              17,571 (23%)

       Total:               79,335 (100%)           47,888 (60%)
-------------------------------------------------------------------------
 Memory(k):             RA Memory:              Over-reads:        2,132

  Status: 02 00 00 00    System ID:    TSO    Area Address: 19614A80



Command ==>
```

The first section of this screen (Optimization Summary) provides optimization statistics for this job. This information is provided in the same format as that provided at the buffer and database level (see section Buffer Information).

The following additional fields are displayed:

Field	Description
Memory	The total memory, in kilobytes, of all memory classes used for this job.
RA Memory	The total memory, in kilobytes, of all read-ahead areas allocated to this job.
Over-reads	The number of read-aheads performed but not needed by this job, and the percentage of non-needed over-reads to the number of successful read-aheads. Non-needed over-reads represent overhead that may reduce the effectiveness of read-ahead optimization. In general, over-reads should not exceed 25% of read-ahead successes.
Status ... Address	These fields are reserved for Software AG use.

PF9 on the Job Details screen can be used to display the second job detail screen.

```
15:51:07  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I003) *****  2008-11-26
 Run-mode: 17004             Job Details from A8P17004 : 17004        F12300MC

 Job:    UKRPE Type: TSO       Number: U34394          Started Nov 26,2008 15:24

 Job Information-------------------------------------------------------------
   Peak Concurrency...: 0
   User Areas:  In Use: 0        Peak: 0           Recovered: 0
   CID  Areas:  In Use: 0        Peak: 0
 Read-ahead Memory Categories------------------------------------------------
   Size(k):  0 Peak No: 0      Usage.: 0           Failures: 0
            0          0             0                    0
            0          0             0                    0
            0          0             0                    0
 Client Runtime Controls----------------------------------------------------
             Job End Stats..: N            Direct Access: ON
 Read-ahead Optimization Control: BAT    Read-ahead Limit(k): 0




   Command ==>



Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
     Help        Exit  Refr       Excl Gen                     Node  Menu
```

The first section of this screen (Job Information) provides the following information:

Field	Description
Peak Concurrency	The number of command work areas allocated to this job.
User Areas	In Use: the number of user areas currently in use. Peak: the highest number of user areas which have been concurrently in use. Recovered: the number of times an old user area was recovered (reused) to satisfy the requirement for a new user area.
CID Areas	In Use: the number of Command ID areas currently in use. Peak: the highest number of Command ID areas which have been concurrently in use.

The second section (Read-Ahead Memory Categories) provides the following information:

Field	Description
Size(k)	The four sizes available for read-ahead memory allocation from the Adabas Fastpath buffer.
Peak No	The highest number of read-ahead areas, by size, allocated to this job.
Usage	The number of times the size category was used.
Failures	The number of times the size category request could not be satisfied.

The third section contains the current values for the client runtime controls. See the section Adabas Fastpath Parameters for descriptions of these parameters.

Note:
The parameter values currently being used by the job are displayed. Once a job is disconnected, these values are reset automatically to the default parameter values.

PF6 can be used to display the Excluded Command Analysis screen as described in the section Buffer Information.

System Job Information

Selecting option code 4 on the Buffer Statistics and Interaction screen invokes the System Job Summary screen.

Note:
You can also access this screen by entering 2.4 on the command line.

This screen contains a list of system job areas for the active Adabas Fastpath buffer. This is normally the Asynchronous Buffer Manager task and any database components.

```
15:53:10  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I003) *****  2008-11-26
 Run-mode: 17004               Jobs for A8P17004 : 17004              F12400MA

 Buffer Session: 567           Started: Nov 26,2008  10:25    Size(k): 1023

 C   Job Name Number Job Type    SVC  DB   Nuc ID           Status
 _                   AFPADA      254 17015                  DB down
 _   N8C81003 C34417 AFPADA      254 17003                  Active
 _   A8P17004 C32991 AFPABM                                 Active







 Mark with D(etail),S(ervices)

 Command ==>



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

The following information is provided:

Field	Description
C	Option code. The following options are available: d: display the Asynchronous Buffer Services menu s: display the Database Component Services menu **Note:** These services are described in the section Special Services.
Job Name Number Type	The job name, job number and job type.
SVC	The Adabas SVC used for this job.
DB	The Adabas database used for this job. This is the "external" DBID (DBID used by the application program).
Nuc ID	This ID is used by a member of Adabas Parallel/Cluster Services. These services may have "internal" DB numbers.
Status	The status of the job (active, unused).

PF10 can be used to display the Optimized Job Summary screen.