

Adabas Fastpath

Adabas Fastpath Online Services

Version 8.1.2

June 2014

This document applies to Adabas Fastpath Version 8.1.2.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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Document ID: AFP-ONLINE-SERVICES-812-20140626

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1 Adabas Fastpath Online Services

This document describes Adabas Fastpath Online Services (SYSAFP).

Using Online Services

System Settings

Parameter Maintenance

Session Monitoring

Buffer History

Buffer Operations and Reporting (APFCMD)

Special Services

Optimization Sampling (AFPLOOK)

Protecting AFP Information when using Adabas Utilities

2 Using Online Services

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This section describes the general usage of Adabas Fastpath Online Services.

Online Services Main Menu

▶ to invoke the Adabas Fastpath Online Services main menu:

- 1 logon to SYSAFP
- 2 enter the command MENU

The Main Menu screen appears as shown below:

```
11:48:52  ***** A D A B A S  FASTPATH SERVICES 8.1.2  *****                2006-05-19
                                                - Main Menu -                                F1MAINM1

      Code      Service
      ----      -
      0          System Settings
      1          Maintenance
      2          Buffer Statistics and Interaction
      3          Buffer History
      4          Printing Facility
      5          Special Services
      6          Afplook
      7          About Adabas Fastpath
      .          Exit
      ----      -
Code ..: _


You can easily switch around the tools for Fastpath, Vista etc by use of the
PF Keys shown, or use the codes COR, AFP, AVI, AAF, ATM as commands - anytime.


Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12
      Help      Exit      COR      AVI  AAF  ATM      Vers
```

Main Menu Screen

The following services are available:

Service	Description
System Settings	Maintain Adabas Fastpath configuration file.
Parameter Maintenance	Maintain Adabas Fastpath optimization parameters.
Session Monitoring	Display Adabas Fastpath session statistics.
Buffer History	Display Adabas Fastpath buffer history information.
Printing	Print Adabas Fastpath reports.
Special Services	Perform miscellaneous actions for the Adabas Fastpath components.
Online Sampling (APFLOOK)	Perform optimization sampling.
About Adabas Fastpath	Display Adabas Fastpath release information.

 **Note:** When you invoke Adabas Fastpath, you are logged on automatically to the highest installed, non-demo version of Adabas Fastpath Online Services. The Adabas Fastpath version is displayed in the first line of screen headers. If you have not installed the INPL from the Adabas Fastpath installation tape, "Demo" will be appended to the version in this line. From the main menu you can then use PF12 to obtain a list of installed versions, from which you may select one.

 **Note:** From the Adabas Fastpath main menu, you may switch to the online systems of Adabas System Coordinator, Adabas Vista, Adabas SAF Security or Adabas Transaction Manager by pressing the appropriate PF key. You may also switch from any screen with a command line by entering the appropriate three-character code (for example, AVI for Adabas Vista) as a command. You may only switch to the same version of another online system.

Navigation

You can access Adabas Fastpath Online Services screens in two ways:

- sequentially by selecting a menu option and entering it in the Option field; or
- directly by typing one of the numerical commands indicated in the following table on the command line.

For example, entering the command 1.1 on the command line directly accesses the Buffer List screen within the Parameter Maintenance function without first accessing the Parameter Maintenance menu.

Function	Object	Command
System Settings	Menu	0
Parameter Maintenance	Menu	1
	Buffer List	1.1
	Buffer Add	1.1.1
	File List	1.2
	File Add	1.2.1
	Job List	1.3
	Job Add	1.3.1
Buffer Statistics	Menu	2
	Buffer Display	2.1
	Database List	2.2
	File Lists	2.2.1
	File Set Summary List	2.2.2
	File Set List	2.2.3
	Optimized Job List	2.3
	System Job List	2.4
Buffer History	Menu	3
Online Printing (AFPCMD)		4
Special Services	Menu	5
	Buffer	5.1
	Database Component	5.2
	Local SYSAFP	5.3
Online Sampling (AFPLOOK)	Menu	6
	Start AFPLOOK	6.1
	Display Files	6.2
	Display File Detail	6.2.1
	Display Summary	6.3
About Adabas Fastpath	List	7

PF Keys

Adabas Fastpath Online Services uses PF keys for various actions. Key functions are standard throughout the system, wherever possible. The PF keys that apply to each screen are indicated at the bottom of the screen.

The following keys apply throughout the system:

PF Key	Function	Description
1	Help	Invoke the help specific to the current screen
3	Quit	Quit and return to the previous screen
12	Menu	Return immediately to the main menu

The following keys apply generally, depending upon the type of action or function in use:

PF Key	Function	Description
4	Refr	Active screens: refresh the data
5	Upd	Maintenance screens: commit the update
7	Top	Lists: return to the top of the list
8	Next	Lists: move to the next page
10	Add	Maintenance screens: add an object

Online Help

Online help information can be invoked using PF1. The help screen that appears applies to the current screen and may comprise several pages. From each help screen, you can access lower level options or return to previous, higher levels. An example of a help screen follows:

```
15:40:35 ***** A D A B A S   FASTPATH SERVICES 8.1.2 - DEMO *****      2006-05-19
          H E L P for Buffer Parameter Maintenance      Page 1 of 1      F11100H1
```

This screen allows the user to select from a list of Adabas Fastpath Buffers. All buffers are shown even though they may not be accessible from the current environment. This allows any parameters to be maintained and controlled from any environment with access to the configuration file.

The SVC and DBID shown are for the Buffer; do not confuse with file and database parameters.

If the list extends to more than one page, then PF6 may be used to restart the list at the top, PF7 to move back a page, PF8 to move to the next page and PF9 to the bottom of the list.

The following options are available:

- 1 ADD - PF10 is used
- 2 MODIFY - 'm' = modification of detailed parameters
- 3 DISPLAY - 'd' = display buffer parameter details
- 4 PURGE - 'p' = deletion of buffer and any file parameters
- 5 RENAME - 'r' = rename of the buffer and any file parameters
- 6 COPY - 'c' = copy buffer and any files to a new name
- 7 FILE - 'f' = display list of file and database parameters for the buffer

Enter options 1 to 7 for Help about the individual functions, or,
 . '.' to End Help, '-' for Previous Pages

Help Screen Example

In the above example, you can navigate by entering

-	to move backwards and up a menu level; or
1 through 7	to move down a level to the function selected.

If the help screen comprises multiple pages, you can enter

+	to move to the next page; and
-	to move to a previous page until page 1, then back up a level.

3 System Settings

This service is used to maintain the Adabas Fastpath configuration file.

```
18:21:37 ***** A D A B A S FASTPATH SERVICES 8.1.2 ***** 2006-05-19
          - System Settings - F10000M1

          Code      Service
          ----      -
          1         LFILE 152 Maintenance
          .         Exit
          ----      -
Code...: _

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

System Settings

Option code 1 on the System Settings menu invokes the screen shown below:

```
18:24:45                LFILE 152 Maintenance                2006-05-19
                                                U1LFILM2
```

```
Current Settings for LFILE 152:
Original LFILE = ( 152 , 135  , 18  )
Current LFILE  = ( 152 , 135__ , 18__ )
                (effective only for this Natural session)
```

```
Default pop-up settings:
Do you want to see this window again?
- for the current SYSAFP session... N
- for future SYSAFP sessions..... N
```

```
PF3 Exit      PF5 Update/Confirm
```

Configuration File Maintenance

The original and current settings for the Adabas Fastpath configuration file are shown. You can enter or change the database and file number to be used for the current Adabas Fastpath configuration file.

You can also indicate whether or not you wish to have this window displayed for the current or future SYSAFP sessions.

4 Parameter Maintenance

- Parameter Maintenance Menu 12
- Buffer Parameters 13
- File Parameters 16
- Client Runtime Controls 23

This service is used to define the Adabas Fastpath optimization parameters.

Parameter Maintenance Menu

Selecting option code 1 from the main menu or entering the command 1 on the command line displays the Parameter Maintenance menu.

```
18:21:37 ***** A D A B A S FASTPATH SERVICES 8.1.2 *****          2006-05-19
          - Parameter Maintenance -          F11000M1

          Code   Service
          ----   -
          1     Buffer Parameters
          2     File Parameters
          3     Client Runtime Controls
          .     Exit
          ----   -

Code ...: _

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

Parameter Maintenance

Select an option code to invoke the corresponding menu for the type of parameters to be defined/modified:

- [Buffer Parameters](#)
- [File Parameters](#)
- [Client Runtime Controls](#)



Note: Before proceeding, you may wish to review the section Adabas Fastpath Parameters which provides a complete list and description of each parameter type.

Buffer Parameters

Selecting option code 1 from the Parameter Maintenance menu or entering 1.1 on a command line displays the Maintain Buffer Parameters screen.

The currently defined Adabas Fastpath buffers are listed.

For an existing buffer, you can enter any of the option codes described below.

You can use PF10 to add a new buffer definition as described in section [Adding a New Buffer](#).

```

12:36:27 ***** A D A B A S FASTPATH SERVICES 8.1.2 *****          2006-05-19
          - Maintain Buffer Parameters -                               F11100M1

      <----- Buffer -----> Coordinator      Size      Direct      Read-
C      Name      SVC      DBID      Group      (k)      Access      ahead      Comments

_      AFPDAEF      255      11001      AFPGROUP      4096      ON      ON
_      AFPDA2F      255      11002      AFPGROUP      4096      ON      ON
_      AFPDA3F      255      11003      AFPGROUP      4096      ON      ON
_      V811ME01      244      8111      V811GR01      8192      ON      ON
_      V811ME02      244      8112      V811GR01      4096      ON      ON

Mark with D(isplay),M(odify),P(urge),R(ename),C(opy),F(iles)

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

```

Maintain Buffer Parameters

The following information is provided:

C	Option code (D: display buffer parameters, M: modify buffer parameters, P: purge buffer, R: rename buffer, C: copy buffer, F: file parameters, E: expand to show member buffers). For more information on the Modify function, see Modifying Buffer Parameters .
Name SVC DBID	The buffer name, the Adabas SVC used by this buffer, and the database used by this buffer.
Coordinator Group	The name of the Adabas System Coordinator group in which this buffer is to be a member. Adabas Fastpath buffers operate as members of an Adabas System Coordinator group.

Size	The memory size for this buffer.
Direct Access	Indicates whether or not direct access optimization is to be used for this buffer.
Read Ahead	Indicates whether or not read-ahead optimization is to be used for this buffer.

Adding a New Buffer

To add a new buffer, press PF10 on the Buffer Parameter Maintenance screen. The following screen appears:

```

11:59:24                2006-05-19
      Add Buffer          F11110MB

Size(k)      : 4096

System Coordinator
Group Name   : V811GR01
Member Name  : X811ME03

(Leave empty to select)

Command ==>
      PF1 Help   PF3 Exit   PF5 Add
    
```

Add Buffer

You must provide values for the following fields:

Size	The size of the buffer to be added.
Group Name	The name of the Adabas System Coordinator group in which this buffer is to be a member. Adabas Fastpath buffers operate as members of an Adabas System Coordinator group. The group must have already been defined using Adabas System Coordinator Online Services.
Member Name	The member name is the job name of the Adabas System Coordinator daemon under which this buffer is to operate. The member name may have already been defined. If not you will be prompted to define it by entering the unique Node ID by which this member is to be identified.

Modifying Buffer Parameters

Buffers are added with default parameters. After a buffer has been added, you can view/modify all the default settings by using the **d** or **m** option code on the Maintain Buffer Parameters screen. The following sample screen lists the general parameters for buffer V811ME01.

```

16:47:23  ***** A D A B A S   FASTPATH SERVICES 8.1.2 (I001) ***** 2006-10-09
          - Buffer V811ME01 -                               F11120MA

System Coordinator Group Name: V811GR01   Member Name: V811ME01

Adabas SVC Number:      244           Designated DBID:           8111

Last Modified:          2006-10-09 By User ID:           UKSJU
Last Buffer Address:    00000000   Length: 00000000   Session: 0

----- General Parameters -----

Size(k):                8192           Minimum Buffer Size(k):    0
Maximum Jobs:           12             Set ID Length Limit:     1024
RB Length Limit:       2048           Message Level(Hex):      00

Additional encodings:  None           _ (mark to alter)

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

```

You can use this screen to review and, if necessary, modify any of these buffer parameters.

Refer to section Adabas Fastpath Parameters for a description of each of these parameters.

By pressing PF11, you can display the detail parameters for this buffer:

```
16:00:13 ***** A D A B A S FASTPATH SERVICES 8.1.2 (I003) ***** 2008-09-11
                Buffer V811ME01                                     F11120MB

Adabas SVC Number: 244          Designated DBID: 8111

Last Modified: 2006-05-19 By User ID: UKSJU
Last Buffer Address: 00000000 Length: 00000000 Session: 0
----- Detailed Parameters -----
Fast cache attempts: 32          Fast set create attempts: 25
Coherence Limit (per sec): 32    Suspension Period (mins): 3
Default pacing rate: 10          Set Concurrency: 2
Freespace Index: 512            Average Item Size: 256
                                Async coherence messages: Y

----- Operational Control -----
Log every n Minutes: 60          Keep for n Days: 30
Restart every n Hrs: 0           Restart Time: 17:30
Direct Access: ON                Read-ahead: ON
Find Sx/L1: ON                   READ LOGICAL L3: ON
READ PHYSICAL L2: ON             HISTOGRAM L9: ON

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

You can use this screen to review and, if necessary, modify any of these buffer parameters.

Refer to section Adabas Fastpath Parameters for a description of each of these parameters.

File Parameters

For each Adabas Fastpath buffer, file parameters can be defined which indicate for exactly which databases/files optimization is to be performed. You can access the File Parameters maintenance function:

- from the Parameter Maintenance screen after specifying a previously defined buffer; or
- from any Buffer Maintenance screen.

By pressing PF10 on either of these buffer modify screens, you can access the File Optimization Parameters screen.

```

8:21:37 ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****           2006-05-19
      - File Optimization Parameters for: Global AFP311A -           F11200MA

                                Start  End      Update
                                Time   Time    Sensitivity
C   DBID  File   SVC    Time   Time
-   11    7     254
-   12    7     254
-   13    7     254
-   14    7     254
-   71    7     254
-   111   66    254    12:00  16:00
-   193   1
-   193   2
-   193   3
-   193   4
-   193   5
-   193   7     254

                                Reposition
                                DBID: _____
                                File:  _____

Mark with D(isplay),M(odify),P(urge),C(opy)

Top of List
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12
      Help           Exit Refr                               Fwd  Bot  Add      Menu
  
```

File Parameter Selection

This screen lists, for the specified Adabas Fastpath buffer, all databases and files currently defined for Adabas Fastpath optimization.



Note: You can use the Reposition function to position to a specific database/file in the list.

Field	Description
C	Option code (D: display file parameters, M: modify file parameters, P: purge file parameters, C: copy file parameters).
DBID	Adabas Database ID.
File	Adabas File Number.
SVC	Adabas SVC.
Time	The specific time period during which Adabas Fastpath optimization is to be in effect. See parameter Start Time.
Update Sensitivity	Controls how Adabas update commands are to be processed. See parameter Update Sensitivity.

■ [Adding File Parameters](#)

▪ Maintaining File Parameters

Adding File Parameters

In the File Optimization Parameters screen, use PF10 to add a new file parameter. The following screen will appear:

```

12:30:07                2006-05-19
                        F11210M1

Add File Optimization Parameter

Buffer Name:  V811ME01
File:        0
              (0 = DB default)
in DBID:     _____
using SVC:   _____ (Optional)

Optional Time Window
Start(HH:MM): _____ End: _____
(Leave empty for 24 hours)

Command ==>
PF1 Help   PF3 Exit   PF5 Add ←
    
```

Add File Parameter

File	The Adabas file number for which Adabas Fastpath optimization is to be defined. Note: By not specifying a file number, you can define a default parameter set for all files in a database (in this case only read-ahead optimization but not direct access optimization can be applied). Individual file parameters override a database default parameter.
in DBID	The Adabas database in which the file to be optimized is located.
using SVC	The Adabas SVC number. Note: Normally, the SVC parameter is only used at z/OS, MSP, and VSE/ESA sites where multiple Adabas SVCs are required; otherwise, it need not be used. If multiple SVCs are in use, all databases defined for optimization in the same buffer must use the same SVC as the buffer (and the Adabas System Coordinator hosting the buffer).
Time Window	Optimization is only to be in effect within the specified time window. See parameter Start Time.

After a file parameter is added, the File Parameters Maintenance screen can be used to define further optimization parameters which are to be in effect for the file. This is described in the following section.

Maintaining File Parameters

The File Parameters Maintenance function can be invoked by/from:

- automatically from the Add File Parameters function
- by using option code `m` on the File Parameter Selection screen
- from an AFPLOOK File Display screen or from the File Set Summary List screen by pressing `PF5`. Similarly, hot keys on this screen can be used to access AFPLOOK and File Set Summary.
- by entering `1.2` on a command line anywhere in the system, provided that a database and file number have previously been established using this screen or one of the other functions in the hot key chain.

The following screen appears:

```

15:30:34 ***** A D A B A S  FASTPATH SERVICES 8.1.2 *****                2006-03-14
- File Optimization Parameters for: A8P17004 -                                F11220MA

File: 9      DBID: 17003   SVC:                Last Modified: 2006-03-13 by: UKRPE
Start Time (HH:MM): _____ End Time: _____ Update Sensitivity: D Distributed
Initial Status:      ON          Set Limit (k):  0
Set Id Length Limit: 0          RB Length Limit: 0          Set Concurrency: 0
Expanded File:       N          Cache secure file: N          Pacing: 0
Password for secure file DA-caching (not recommended):
Additional encodings: Default          _ (mark to alter)
---- Direct Access ----- Optimization Summary ----- Read-ahead -----
L1 Get/Read by ISN  ON          | L1 Read by ISN      ON
L3 Read Logical    ON          | L2 Read Physical   ON
L9 Histogram       ON          | L3 Read Logical    ON
S1 Find Records   ON          | L9 Histogram       ON
S2 Find Sorted    ON          | S1 Find Records    ON
                  | S2 Find Sorted     ON
                  | S8 Process ISN List ON
                  | S9 Sort ISN List   ON
PF10 to Modify Direct Access      + PF11 to Modify Read-ahead

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12
      Help      Exit      Upd  Look      File Dir  R-a  Menu

```

File Optimization Parameters

The following parameters can be maintained using this screen:

Parameter	Description
Start Time, End Time	Optimization is only to be in effect within the specified time window. See parameter <code>Start Time</code> . Note: You can enable optimization for a different time window by creating a different parameter set for this file.
Update Sensitivity	Indicates how Adabas Fastpath is to process commands which result in database updating. The following values are permitted: N (none). Ignore all update commands. R (record level). Remove data by identifying single records. F (file). Remove all data for the file held in the Adabas Fastpath buffer. D (distributed record level). Use only on advice from Software AG support.
Initial Status	By setting this field to OFF, you can indicate that the file parameters being defined are not to be activated until this field is changed to ON.
Set Limit	Adabas Fastpath creates sets of direct access command models. This parameter limits the size (in k) of data items within a set.
Set ID Length Limit RB Length Limit Set Concurrency	These parameters can be used to decrease (but not increase) the values of the equivalent buffer parameters. These parameters are described in section Adabas Fastpath Parameters.
Expanded File	This field must be set to Y if the file is defined to Adabas as an expanded file. If so, direct access optimization cannot be defined for L3/L9 commands.
Cache secure file	If the file is password protected, but direct access caching is still required, then set this parameter as 'Y'. Use of secure file caching is not recommended.
Password for secure file D-A caching	If the file is password protected and direct access caching is still required, and the cache secure file parameter is set to 'Y', then the password needs to be given here. Use of this parameter is not recommended.
Additional Encodings	The setting for direct-access optimization for data of a different character encoding from that used by Adabas to store the data internally. Settings: <ul style="list-style-type: none"> ■ Default: Inherit the buffer-level setting. ■ None: Only data for Adabas internal encodings. ■ All: All the possible encodings allowed by Fastpath. ■ Single byte ascii: This additional character encoding. ■ Single byte ebcdic: This additional character encoding. ■ Double byte ascii: This additional character encoding. ■ Double byte ebcdic: This additional character encoding.
Pacing:	Controls the rate at which housekeeping is performed for this file.
Optimization Summary	The current direct access and read-ahead optimization settings for each Adabas command used for this file. Optimization can be defined for the following commands:

Parameter	Description
	<ul style="list-style-type: none"> ■ direct access: L1 , L3 , L9 , S1 , S2 ■ read-ahead: L1 , L2 , L3 , L9 , S1 , S2 , S8 , S9 <p>Note: Sx commands are generally followed by L1 commands in order to retrieve subsequent records. Although it is the subsequent L1 commands that benefit from read-ahead optimization, control is through the initiating Sx command.</p>

Use PF5 to commit all changes. Use PF3 to exit without applying any changes.

Use PF10 and PF11 to modify the direct access and read-ahead optimization parameters as described in the following sections:

- [Direct Access Optimization Parameters](#)
- [Read-Ahead Optimization Parameters](#)

Direct Access Optimization Parameters

The following screen is displayed when you press PF10 from the File Optimization Parameters screen:

```

15:42:29      ***** A D A B A S  FASTPATH SERVICES 8.1.2 *****                2006-03-14
              - File Optimization Parameters for: A8P17004 -                    F11220MB

File: 9      DBID: 17003  SVC:                Last Modified: 2006-03-13 By: UKRPE

Start Time (HH:MM): _____ End Time: _____ Update Sensitivity: R Record
Initial Status:      ON      Set Limit (k): 0
Set Id Length Limit: 0      RB Length Limit: 0      Set Concurrency: 0
Expanded File:       N      Cache secure file: N      Pacing: 0
Password for secure file DA-caching (not recommended):
----- Direct Access Optimization -----
              On/Off  Except for:  Field level overrides
L1 Get/Read by ISN  ON
L3 Read Logical    OFF      Now Optimizes  AA  AB  ___ ___ ___ ___ ___
L9 Histogram      OFF
S1 Find Records   ON      Now Excludes  BB  ___ ___ ___ ___ ___
S2 Find Sorted    OFF
PF11 to Modify Read-ahead

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12
      Help      Exit      Upd  Look      File Back R-a  Menu
    
```

Field	Description
Command	Adabas read or query command (L1/L3/L9/S1/S2).
On/Off	Indicates whether or not optimization is to be in effect for the command. In the screen example, L1 commands (all fields), L3 commands (for fields AA nd AB only) and S1 commands (excluding S1 commands in which field BB is used as the primary descriptor) are to be optimized. The default is OFF.
Except for	The comments Now Optimizes and Now Excludes are displayed when the Enter key is pressed to illustrate the effect of field level overrides.
Field level overrides	Used to include/exclude certain fields from optimization. In the screen example, L1 commands (all fields), L3 commands (fields AA nd AB only) and S1 commands (excluding field BB) are to be optimized.

Use PF5 to commit all changes. Use PF3 to exit without applying any changes.

Read-Ahead Optimization Parameters

The following screen is displayed when you press PF11 from the File Optimization Parameters screen:

```

15:45:35   ***** A D A B A S  FASTPATH SERVICES 8.1.2 *****           2006-03-14
          - File Optimization Parameters for: A8P17004 -                   F11220MC

File: 9      DBID: 17003   SVC:                Last Modified: 2006-03-14 by: UKRPE

Start Time (HH:MM):  _____ End Time: _____
Initial Status:      ON
Expanded File:       N

----- Read-ahead Optimization -----
On/Off   Except for:   Field level overrides
L1 Read by ISN      ON
L2 Read Physical   ON
L3 Read Logical     OFF      Now Optimizes   AA  _ _ _ _ _
L9 Histogram       OFF
S1 Find Records    ON      Now Excludes   CC  _ _ _ _ _
S2 Find Sorted     OFF
S8 Process ISN List OFF
S9 Sort ISN List   OFF

PF10 to Modify Direct Access

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

Read-Ahead Optimization Parameters

Field	Description
Command	Adabas read or query command (L1/L2/L3/L9/S1/S2/S8/S9).
On/Off	Indicates whether or not Adabas Fastpath optimization is to be in effect for the command. In the screen example, L1 commands, L2 commands, L3 commands (only when field AA is used as the primary descriptor) and S1 commands (excluding S1 commands in which field CC is used as the primary descriptor) are to be optimized. The default is OFF.
Except for	The comments Now Optimizes and Now Excludes are displayed when the Enter key is pressed to illustrate the effect of field level overrides.
Field level overrides	Used to include/exclude certain fields from optimization. Field overrides are not applicable for L1/L2 commands. In the screen example, L1 commands, L2 commands, L3 commands (only when field AA is used as the primary descriptor) and S1 commands (excluding S1 commands in which field CC is used as the primary descriptor) are to be optimized.

Use PF5 to commit all changes. Use PF3 to exit without applying any changes.

Client Runtime Controls

Selecting option 3 from the Parameter Maintenance screen or entering 1.3 on a command line displays the Client Runtime controls screen:

```

11:33:50      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-09
              - Client Runtime Controls -                               U11300M1
                                                    Reposition to Type: _____
                                                    Name: _____

              Client Controls
C Type      Name      AFP   AVI   ATM   COR      Comments
_ CICS (DTR) CICTDTR                Y
_ Batch     RPE***** Y                Y
_          AFPJA      Y                Y      Overrides
_          AFPJB      Y                Y
_ TSO      UKRP***** Y                Y
_          UKRPE      Y                Y

Mark with Display,Expand,Modify,Purge,Rename,Copy,Overrides,Information ←

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

```

Maintain Client Runtime Controls

The following information is provided:

Field	Description
C	Option code (display, modify, purge, rename, copy). For more information on the Modify function, see Maintaining Client Runtime Controls .
Type	The job type.
Name	The control name. For non-DTR or API type, this will be the same as the job name.
AFP AVI ATM COR	Shows which products have Client Runtime controls defined.
Comments	Highlights existence of Session Overrides or Site Information (Info).

Press PF10 to add a new job.

Press PF11 to switch between products for maintenance of client runtime controls.

Adding Client Runtime Controls

When you press PF10 on the Maintain Job Parameters screen, the following window is displayed for adding a new job definition:

```

11:45:54      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-09
                - Add Client Runtime Control -                          U11310M1

Select (mark one) :
                _ Batch
                _ COM-LETE
                _ 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

```

Select Job Type

Name	<p>The control name.</p> <p>Note: For non-DTR and API types, the control name will be the same as the job name.</p> <p>Note: A control name can include one or more asterisks (*) to indicate a wild card. For example, the client runtime control for a type of BATCH with the name UK**E is found by any job with the name UK in positions 1-2 and E in position 5, no matter what the characters are in positions 3-4. If an asterisk (*) is the last character in a control name, the remainder of positions in the name through the eighth are padded with asterisks. Wilcards are not permitted for DTR or API types.</p>
Type	<p>The job type. Each different job type has a different characteristic so it is important to select the correct type.</p> <p>Note: If you are using CICS/MRO with dynamic transaction routing, or CICSplex, you must select the job type (DTR - Dynamic transaction routing). The standard CICS job type is used for CICS/MRO without dynamic transaction routing or for other CICS environments.</p> <p>Note: If you mark the selection <i>None of the above</i>, another selection window appears with additional job types. If you need to use a job type from the second selection window, contact Software AG for advice.</p>

Once you select a job type, a screen will ask for the job name. In this example, controls for a TSO type job are being defined.

```
12:31:36      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-09
                - Add Client Runtime Control -                          U11310M3
```

```
Type: TS0
Name: _____ (* 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
```

Adabas System Coordinator runtime controls will then be required (see the Adabas System Coordinator documentation for further details).

```
12:33:58      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-09
                - System Coordinator Runtime Controls -                  U11310M5
```

```
Operation mode (mark one):
Type: TS0                               Use normal autodetect approach: X
Name: UKRRRR__                          Enable COR even if no products: _
                                           Disable all products including COR: _
```

General Settings

```
Estimated Client Sessions: 2_____ API runtime overrides..: N (Y/N)
Memory pool extents (k)..: 256_
Maximum idle time (sec)..: _____
```

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

Refer to the Adabas System Coordinator documentation for more information.

The group name will then be required.

```
12:36:08      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-09
                - Adabas Fastpath Runtime Controls -                U1132FM2
```

```
Name: UKRRRR
Type: TSO
```

```
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
```

Normally, the absence of client runtime controls for a job implies that optimization is not applied. Thus, you can implement optimization gradually by defining only specific jobs to receive optimization.

Alternatively, this can be reversed. Client runtime controls can be defined for default jobs so that optimization is applied to all jobs of a specific category. Then, you can specify only the jobs that are not to be optimized and those that differ from the default.



Note: A specific job definition overrides any wild card job definitions or any default definition.

Maintaining Client Runtime Controls

To maintain client runtime controls, on the client runtime controls screen, enter the option code m next to the job for which parameters are to be maintained. In the sample screen shown below, the job parameters for batch job KM27WD are displayed.

The following screen will be displayed:

```
17:44:06 ***** A D A B A S FASTPATH SERVICES 8.1.2 *****      2006-05-19
                - Adabas Fastpath Runtime Controls -                F11320M1
```

```
Name: KM27WD                      Last Modified: 2006-03-19
Type: Batch                        by Userid: UKSJU
```

```
System Coordinator
(Buffer) Group Name.: SYSC033      Fastpath ON/OFF: ON

Job End Stats.....: N            Direct Access...: ON

Read-ahead Optimization Control: BAT  Command Time...: 00000000 (Hex.)

Read-ahead Memory Limit(k).....: 0
```

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

Detailed Client Runtime Controls

Parameter	Description
FASTPATH ON/OFF	If OFF is specified, Adabas Fastpath optimization will be not be performed for this job.
Job End Statistics	If Y is specified, Adabas Fastpath performance information will be sent to the operator console when a job ends.
Direct Access	If OFF is specified, no direct access optimization will be performed for the job, without regard to other parameters.
Read-Ahead Optimization Control	If OFF is specified, no read-ahead optimization will be performed. In addition, you can choose between the read-ahead factor algorithms for TP monitors (TP) or for batch (BAT). While both algorithms accelerate the factor as the sequence length increases, the batch algorithm accelerator is faster than the one for TP monitors. Normally, the default setting is the most efficient.
Read-Ahead Memory Limit	Used to restrict the memory allocated to the job for read-ahead optimization.

Specifying Overrides to Client Runtime Controls

Overrides to the base-level client runtime controls may be specified. This provides the possibility for a greater granularity of control, allowing controls to relate specifically to particular logins, job steps or transactions.

Enter 'O' next to a job which already has AFP client controls in the Client Runtime Controls screen.



Note: Not all job types will support overrides.

Then enter PF10 to add some client runtime control overrides.

The following screen will be displayed:

```

15:54:06      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-09
                - Add Client Runtime Control Override -                U11381M1

Type: Batch          Name: BLAH1

Select the override type ....: _ Login id
(mark one)           X Stepname

and specify the override name: AFPTEST1

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

```

In the example an overrides to a job of type batch is being created, for a specific step.

The following screen will be displayed:

```
15:55:56      ***** A D A B A S   FASTPATH SERVICES 8.1.2 *****      2006-06-09
              - Client Runtime Controls Override Summary -          U11380M1

Type: Batch           Name: BLAH1

C Type              Name          AFP    Overrides
_ Stepname          AFPTTEST1
                   AVI    ATM    COR    Comments
                   *Added (empty)

Mark with Display,Modify,Purge,Rename,Copy,Information

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

Select M to modify the override client runtime controls.

The following screen will be displayed:

```

15:59:56      ***** A D A B A S   FASTPATH SERVICES 8.1.2*****      2006-06-09
                - Adabas Fastpath Runtime Controls -                  U1138FM1

Control Type : Batch          Name: BLAH1          Last Modified: 2006-04-05
Override Type: Stepname      Name: AFPTTEST1     by Userid: UKRPE

System Coordinator
(Buffer) Group Name.: RPEGRP4          Fastpath ON/OFF: ON

Job End Stats.....: N                Direct Access...: ON

Read-ahead Optimization Control: BAT   Command Time...: 00000000 (Hex.)

Read-ahead Memory Limit(k).....: 0

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

```

These runtime controls may be modified and saved using PF5.

In the Client Runtime Controls screen 'Overrides' will appear in the comments.

These overrides will now apply in preference to the base-level controls for the specific login, job step or transaction.

5 Session Monitoring

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- System Job Information 56

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

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.

Field	Description
	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 (optimization 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
Main Parameters      Value      Allocation      Peak Usage      Commands
Size(k)..Min: 1023  1024          1023            24%             Ignored
Maximum Jobs:       12              1                0
RB Length Limit:   2048
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

PF Key	Name	Function
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
_   198 240      5607           3774           114            Remote Optimizing

Totals:                5607 100%      3774 100%      114 100%
Mark with F(file),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).

Field	Description
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(file 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.

Field	Description
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).

Field	Description
	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.
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.

Reject Error	Description
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.
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-LETE 258 194 Active
_ Unused
_ Unused
_ Unused
_ Unused
_ Unused
_ Unused
_ Unused
_ Unused
_ Unused
_ Unused
_ Unused
_ GXNDP72 B41763 Batch Disconnected
_ GXNDP72 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
-   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -
-   N8C81003 C34417 AFPADA      254 17015         17003         DB down
-   A8P17004 C32991 AFPABM      254 17003         17003         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.

6 Buffer History

This function can be used to display the Adabas Fastpath buffer history information that has been recorded in the Adabas Fastpath configuration file either

- automatically (see the Adabas Fastpath Log Parameter) or
- by using the log function of **Adabas Fastpath Special Services**.

If history logs are present for more than one buffer, selecting option code 3 from the main menu or entering the direct command 3 from the command line displays the following screen:

```
10:59:34      ***** A D A B A S  FASTPATH SERVICES 8.1.2 *****      2006-05-19
                - Buffer History -                                     F13000MA

                Please mark to select Buffer for History Display

                _ AFP811A      Global
                _ SYSC033      Global

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

Buffer History Selection

Mark the buffer for which history information is to be provided. The following Buffer History Available screen appears:

 **Note:** This is the first screen displayed if history logs exist for only one buffer.

Buffer History

```

11:06:19      ***** A D A B A S  FASTPATH SERVICES 8.1.2 *****                2006-05-19
              - Buffer History Available for Global SYSC033 -                F13100MA

      Buffer  <---Logged at--->  <---Direct Access--->  <----Read-ahead----->
Sel Session  Date          Time          Attempts  Optimized  Attempts  Optimized

__  42      May 15,2002 12:38 E
__  43      May 15,2002 12:55 E
__  44      May 15,2002 15:27 E
__  45      May 15,2002 16:09 E
__  46      May 15,2002 17:08 E
__  47      May 15,2002 17:45 E
__  48      May 15,2002 17:48 E
__  49      May 16,2002 11:07 E          144          97          140          80
SS  50      May 16,2002 12:14          147          51          168          96
__  50      May 16,2002 13:14          193          129         182          104
SS  50      May 16,2002 14:14 E          364          256         360          234
__  51      May 16,2002 14:27 E

Select using S or an SS pair, Purge using P or a PP pair.
Position to: Jul 25,2002

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

Buffer History

This screen displays a line for each log record of the selected (or default) buffer. Each line includes the following information:

Column	Description
Sel	<p>The following option codes can be used to process one or more lines (records) of the log:</p> <p>s: display details for one log record ss: display the difference in statistics between a pair of log records p: purge a single log record pp: purge from the first to the last marked log records t: display trace counts for one record tt: display the difference in trace counts between a pair of logs</p> <p>You must enter the options ss pp tt in pairs. The second element of the pair need not be on the same screen but must be within the same buffer session.</p> <p>Use PF6 to clear all entries in the Select column.</p>
Buffer Session	The buffer session number. Certain operations cannot be performed across sessions.

Column	Description
Logged at Date/Time	The date and time the log was recorded.
E M	E indicates end-of-job. M indicates a special log request using the function Special Services.
Direct Access Read-Ahead	The number of attempted and successful direct access and read-ahead optimizations for each logging period.

Use PF8 to display the next page of log records.

If option code *ss* is marked for a pair of records, the following History Interval screen appears. This screen displays the statistics for the time interval specified in the screen heading.

```

11:07:11  ***** A D A B A S  FASTPATH SERVICES 8.1.2 *****                2006-05-19
          History Interval - May 19,2006 12:14 to 14:14                F13110MA

      Buffer Type: Global      Name: SYSC033      SVC: 240 DB: 33
      Connected to:                               Buffer Status : Active
      Started:   May 19,2006   at: 11:14         Ave Memory Val: 51
      Address:   099CB000 Size(k): 1024         Session Number: 50

----- Buffer Statistics -----
      Access Type           Attempts (46%) <-----Successes (68%)

      Read-ahead:           360 (23%)                234 (65%)
      Direct:               364 (23%)                256 (70%)
      RCs:                  (0%)                    (0%)
      Excluded:             865 (54%)

      Total:                1,589 (100%)            490 (31%)

-----

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

```

History Interval Logs

The information contained on this screen is exactly like the General Information screen available directly from this screen by pressing PF7. The excluded command analysis, buffer memory and parameter screens can also be invoked by pressing PF6, PF8, and PF9, respectively. All of these screens are described in the section [Buffer Information](#).

If, on the Buffer History screen, you marked a record with an *s* instead of marking a pair, the following screen will appear displaying the statistics at the time the history log was recorded:

Buffer History

```
11:07:11 ***** A D A B A S FASTPATH SERVICES 8.1.2 *****          2006-05-19
          - Buffer History - Logged May 19,2006 12:14 -                F13110MA
```

```
Buffer Type: Global      Name: SYSC033      SVC: 240 DB: 33
Connected to:
Started:   May 19,2006   at: 11:14      Buffer Status : Active
Address:   099CB000 Size(k): 1024      Ave Memory Val: 51
                                          Session Number: 50
```

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

Access Type	Attempts (13%)	Successes (46%)
Read-ahead:	168 (7%)	96 (57%)
Direct:	147 (6%)	51 (34%)
RCs:	(0%)	(0%)
Excluded:	865 (87%)	
Total:	1,865 (100%)	147 (6%)

Command ==>

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

Buffer History

This screen displays the details for a single log record. PF keys can be used to display the next sequential log record until the end of session is found:

PF Key	Displays...
PF5 Next	The statistics from the current log record.
PF10 Next	The difference between the current and previous log records. The effect of this function varies depending on the type of information being displayed. This key can be used to skip from one statistics time slice to the next showing the statistics achieved in that time slice (taking the difference between one time slice and the next rather than simply displaying the details of each time slice).

Other PF keys provide direct access to the Excluded Command Analysis, General Information, Buffer Memory, and Parameter screens, which are described in the [Buffer Information](#) section.

7 Buffer Operation and Reporting (AFPCMD)

- Using AFPCMD in Online Mode 64

The function AFPCMD provides operating and reporting functions for the Adabas Fastpath buffer. AFPCMD can be used interactively in online mode or it can be invoked using Natural in batch mode.



Note: This section describes only the basic usage of AFPCMD using Online Services. For a complete description, see the section AFPCMD.

Using AFPCMD in Online Mode

In online mode, AFPCMD can be invoked by:

- selecting option code 4 from the Online Services main menu, or
- by entering the command 4 on any screen command line, or
- by entering AFPCMD on any screen command line.

The Online Printing Facility screen will appear:

```
11:14:31 ***** A D A B A S FASTPATH SERVICES 8.1.2 *****                2006-05-19
                - On-Line Printing Facility -                                F14000MA

Please enter the following to specify the required report:

Command: _____ DISPLAY, LIST, PARMS

Objects: _____ BUFFER, JOB, AFPLook, TRACE, DATABASE, FILE, SUMMARY, SET
or ALL

Keywords: _____
          (Press Enter to be prompted for the appropriate keywords)

Printer: _____
PC          for download via NATURAL CONNECTION to a PC printer or file.
SOURCE     for output to the NATURAL source area.
CONNECT    for output into a CON-NECT folder.
Valid Name known to COMPLETE, NAF or any spooling system

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

Online Printing Facility

You must enter a valid command, object, keywords and printer. To print to PC or a printer, print file 7 must be defined correctly.

You can either enter the keywords or repeatedly press the Enter key to be prompted for keywords one at a time. When all keywords are valid, the function is executed and control is returned to this screen.

Refer to the following sections for information on commands, objects and keywords:

- AFPCMD Commands
- AFPCMD Objects
- AFPCMD Keywords

8 Special Services

- Special Services Menu 68
- Asynchronous Buffer Services 69
- Database Component Services 70
- Local Services 71

This section describes the special services functions provided by Online Services.

Special Services Menu

Selecting option code 5 from the Online Services main menu or entering the command 5 on the command line displays the Special Services menu.

```

11:15:24  ***** A D A B A S  FASTPATH SERVICES 8.1.2 *****                2006-05-19
                                                - Special Services -                F1500M1

          Code   Service
          ----   -
          1     Asynchronous Buffer Services
          2     Database Component Services
          3     Local SYSAFP Services
          .     Exit
          ----   -

Code ...: _

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

Special Services Menu

The following services are available, and can be invoked using the appropriate option code.

Code	Service	Provides communication facilities for the...
1	Asynchronous Buffer Services	selected active Adabas Fastpath buffer.
2	Database Component Services	database(s) for which Adabas Fastpath has been installed.
3	Local SYSAFP Services	job (a TP monitor, for example) in use when executing the functions.

Asynchronous Buffer Services

Selecting option code 1 from the Special Services menu or entering the command 5.1 on any command line displays the following window:

```

11:15:55                2006-05-19
                        F15100MA
Special Services for
  ABM Node Id: 33      SYSC033
  Status Active

      R Restart...(Stop/Start)
      S Stop.....(Terminate)
      N Newcopy...(and Restart)
      P Snap
      L Log
      I ABM Information
      Z Zap Information
      . Exit
Code..: _

Command ==>
          PF1 Help   PF3 Exit ←

```

Asynchronous Buffer Services Menu

Asynchronous Buffer Services communicates with the buffer indicated at the top of the window. If the job is connected to a buffer, that buffer is shown when the window opens. You can override the default buffer by changing the database number to the one defined for the required buffer. All actions are a request to the Asynchronous Buffer Manager (AFPABM) to perform the function.

Option Code	Description
R: Restart	Stop the buffer in an orderly fashion, and then restart it again. Both primary and alternate configuration files (if used) must be available for this operation.
S: Stop	Terminate the buffer in an orderly fashion. Both primary and alternate configuration files (if used) must be available for this operation.
N: Newcopy	Reload the Adabas Fastpath modules for the buffer and every other component connected to the buffer. AFPABM also performs a buffer restart. Both primary and alternate configuration files (if used) must be available for this operation.
P: Snap	Produce a snap dump of the buffer.
L: Log	Write a statistical log to the Adabas Fastpath configuration file.
I: ABM Information	Display general diagnostic information for the Adabas Fastpath buffer job.

Option Code	Description
Z: ZAP Information	Display the numbers of ZAPs that have been applied to the Adabas Fastpath nucleus being used by the Adabas Fastpath buffer job.

Database Component Services

Selecting option code 2 from the Special Services menu or entering the command 5.2 on any command line displays the following window:

```

17:52:34                2006-05-19
                        F15200MA

Special Services for:
  DBID: 0
  SysCo Node: _____

  Z Zap Information
  I Connection Information
  . Exit
Code..: _

Command ==>

PF1 Help  PF3 Exit  PF5 Action
    
```

Database Component Services Menu

The following fields are provided:

Field	Description
DBID	Database Component Services provides services for the database indicated at the top of the window. This can be any active database for which Adabas Fastpath has been installed. If the function is invoked from the System Job Summary screen as in the above example, the database for which communication is required is already established and is shown on the screen. Otherwise, the database number must be entered.
SysCo Node	The Adabas System Coordinator Node ID. This is only required for clustered databases: <ul style="list-style-type: none"> ■ If the Node ID is known, a screen follows showing a cluster map for the database. ■ If the Node ID is not known, you must enter it in this field.

Field	Description
Option Codes	<p>The following option codes may be used:</p> <p>Z : Zap Information. Displays the ZAPs applied to the Adabas Fastpath nucleus used by the selected database component. See the Zap Information screen as described in the next section.</p> <p>I: Connection Information. Displays connection information between the selected database and the Adabas Fastpath buffer to which the database is connected. See the Connection Information screen as described in the next section.</p>

Local Services

Selecting option code 3 from the Special Services menu or entering the command 5.3 on any command line displays the following window.

Local Services provides service request communication for a local job with the TP monitor in use.

```
11:16:44                2006-05-19
                        F15300MA
```

```
Special Services for:
  Local Job DAEFCODE

  Z Zap Information
  I Connection Information
  S Job Statistics
  C ReConnect
  D Disconnect from Buffer
  N Newcopy
  . Exit
```

```
Code..: _
```

```
Command ==>
```

```
PF1 Help  PF3 Exit ←
```

Database Component Services Menu

The following fields are available:

Connection Information

The Connection Status screen, which can be accessed from any of the Service options, displays connection status information:

```

11:18:48 ***** A D A B A S FASTPATH SERVICES 8.1.2 *****                2006-05-19
          - Connection Status Information -                                F1CNXSMA

***** Information Request *****
Status Indicators: 00 1E 00 A0                                Owner: 0000000000000000
Jobname: DAEFCODE No: C30694  Type: 21  Amode: 80

Address List: 1018ADB8      Initialization Error:          RC:
Linker Stub:  1098DEE8      Retry Count: 1000  Limit: 1000
Connection-0: 10996664      Linker SVC: 254
Connection-1: 003E8D00      Event:
Connection-X: 003E54E0      Configuration File: SVC: 240  DB: 198
AFPKRN        90B29BB0      FNR: 19
AFPDEP        00399578      Buffer: SVC: 240      DB: 33
AFPCFG        00311218      Poolname:
Anchor:       099D3000      Pool Address: 00000000
Session:      099E28C8      User Exit 4 Routine:
Reserved:     0000000000000000  CLOGIO: 00

This Information Screen may be useful to Software AG Technical Support

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12
          Exit                               CodeI

```

Connection Information Screen

Although this screen is primarily intended for Software AG use to assist in identifying connection problems, some of the following information may be helpful to users.

Field	Description
Linker Stub	Load address of the Adabas Fastpath module that was linked with the Adabas link routine.
AFPKRN / AFPDEP / AFPCFG	Load addresses of the Adabas Fastpath modules. A zero address indicates that the module could not be found.
Anchor	Address of the Adabas Fastpath buffer pool, if it could be located. This address is usually zero if connection could not be made.
Session	Address of the job area (BSA) within the Adabas Fastpath buffer.
Initialization Error	Error code relating to job initialization. Code 10 indicates that a parameter was corrected by the system and should be ignored. Other codes are related to

Field	Description
	errors detected when reading the Adabas Fastpath configuration file. RC shows the Adabas response code received.

Job Statistics

The Local Job Statistics screen can be invoked by selecting option code S from the Special Services for Local Job window:

```

18:15:38 ***** A D A B A S FASTPATH SERVICES 8.1.2 (I006) ***** 2009-08-25
- Local Job Statistics - F15310MA

Job: UKRPE Type: TSO Number: U31131 Started: Aug 25,2009 18:15

----- Optimization Summary -----
Access Type Attempts (11%) <-----Successes (63%)

Read-ahead: 38 (11%) 24 (63%)
Direct: (0%) (0%)
RCs: (0%) (0%)
Others: 296 (89%)

Total: 334 (100%) 24 (7%)

-----
Memory(k): RA Memory: Over-reads: 8

Status: 00 1E 00 20 System Id: TSO Area Address: 25D49420

Command ==>
    
```

This screen is useful when the job is not connected to a buffer to show the read-ahead optimization, which can continue even when the buffer is not connected.

The information provided is in the same format as that described in the section [Detailed Job Information](#).

9 Optimization Sampling (AFPLOOK)

- AFPLOOK Menu 76
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AFPLOOK can be used to determine whether or not Adabas Fastpath optimization for specific databases or files should be used. This section describes how to use AFPLOOK in online mode.



Note: This section describes only the usage of AFPLOOK using Online Services. For a complete description, see the section AFPLOOK.

AFPLOOK Menu

Selecting option code 6 from the Online Services main menu or entering the command 6 on the command line displays the AFPLOOK Services menu:

```
18:10:59 ***** A D A B A S FASTPATH SERVICES 8.1.2 - DEMO ***** 2006-05-19
- Afplook Services - F16000MA

Code      Service
-----
1         Start Afplook
2         File Display
3         Display Summary
4         Freeze/Pause Afplook
5         Release Afplook
.         Exit
-----
Code ..: _

DB ID: 131      NUC131
Status: Active
User= UKPAL   May 19,2006 17:52
System Coordinator Node: _____

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

AFPLOOK Menu

The following fields are provided:

Field	Description
Code	<p>For a specified database, the options provided can be used to start, stop, release, or display information for the database as a whole or for individual files.</p> <p>Note: Adabas Fastpath automatically detects when a database supported by a cluster of Adabas nuclei, either in a single operating system image (ADASMP) or across multiple operating system images (Adabas Cluster Services), has been selected for AFPLOOK. In this case, a separate menu screen is displayed so that you can indicate which nucleus is to be used.</p>
DB ID / Status / User	<p>These fields contain:</p> <ul style="list-style-type: none"> ■ the number of the database for which AFPLOOK is currently active. This number may have been carried forward from a previous action. ■ the name of the database job. ■ the AFPLOOK status. ■ the user who started AFPLOOK for the database, and when it was started (date and time).
System Coordinator Node	<p>The Adabas System Coordinator Node ID is required for a clustered database only when it is not already known by the system. If this is the case, you are prompted to enter the Node ID.</p>

Because only one AFPLOOK can be active for a database at one time, a strict record of events is needed to establish sequence.

The screen example shows the status of database 131 as *active*. To display the AFPLOOK status of a different database, you may change the database number and press Enter. This may show that the new database is *not active* or it may say "AFPADA not installed". Otherwise, the name changes and the status of the new database is displayed.

- Initially, AFPLOOK is at status *released* : a start can only be invoked when this status is current.
- Once at status *started*, AFPLOOK can be stopped (but not directly released).
- Status *stopped* can then be changed to released, at which point all statistics are discarded.

Statistics, both general and for files, can be displayed when the status is either *active* or *stopped*. When the Adabas nucleus terminates normally, any active or stopped statistics are printed on the DDPRINT file. AFPLOOK statistics can also be printed using AFPCMD.

Starting an AFPLOOK Session

Selecting option code 1 from the AFPLOOK Services menu or entering 6.1 on any command line displays the AFPLOOK Start Sampling screen:

```

16:36:23 ***** A D A B A S FASTPATH SERVICES 8.1.2                2006-05-19
          - Afplook - Start Sampling for DB 198 -                    F16100MA

Maximum Files                               64                (See Note 2)
Max.Commands/Descriptors per File          32
Maximum Concurrent Users                   100
Max.CIDs per User                          10

Max.Commands to Sample                      0                (0=No Limit)
Restrict to Job Name                        _____

Restrict to Files _____

Notes: 1. To sample ALL files - leave the above file table empty
       2. Max. files will be set automatically if file numbers
          are selected

Press PF5 to Confirm Start

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

Start AFPLOOK Processing

The parameters on this screen are described briefly in the following table. Initially, default values for the parameters are shown. You can modify certain parameter values from this screen.

Parameter	Description
Maximum Files	The maximum number of files to be sampled. If one or more files are specified in the parameter Restrict to Files, this parameter will be set automatically to the number of restricted files.
Maximum Commands/Descriptors per File	The maximum number of command/descriptor pairs which can be included in the sampling session. This parameter controls the table size for each file. When all entries are used, the last table entry is used as a general accumulator.

Parameter	Description
Maximum Concurrent Users	The maximum number of concurrent users for this sampling session. When all user table entries are full, new users reuse the least active/oldest user in the table. This may lead to inaccurate reports if the table size is too small. The number of reused user areas is shown in the sample summary section.
Maximum CIDs per User	The maximum number of Command IDs per user for this sampling session. If this maximum is reached, additional commands will be ignored.
Maximum Commands to Sample	The maximum number of commands to be sampled. A value of 0 indicates no restriction.
Restrict to Job Name	The sampling session is to be restricted to commands for the specified job, or for a series of jobs that match the job name as defined using an asterisk (*) as a wild card character.
Restrict to Files	The sampling session is to be restricted to the files specified.

AFPLOOK File Summary

Selecting option code 2 from the AFPLOOK Services menu or entering 6.2 on any command line displays the AFPLOOK File Summary screen.

This screen lists the active files for the selected database, the number of commands for each file, and the potential optimization.

```

12:31:26      ***** A D A B A S  FASTPATH SERVICES 8.1.2 *****                2006-05-19
                Afplook - Files Summary for DB 198                                F16200MA

                Started: May 19,2006 at: 12:30 by: UKDEV1

C   Fnr      Total      Direct Access      RCs      Sequential
-   11
x   18      3071741 (91%)      480751 (16%)      440      2590453 (84%)
-   21        166              37 (22%)      2 ( 1%)      115 (69%)
-   24
-   27        524              200 (38%)      110 (21%)      145 (28%)
-   28       1126              631 (56%)      117 (10%)      192 (17%)
-   30      121927 ( 4%)      30121 (25%)      17411 (14%)      63882 (52%)
-   31      68034 ( 2%)      21588 (32%)      16214 (24%)      25353 (37%)
-   32      12596              5936 (47%)      3900 (31%)      1705 (14%)
-   33       3649              3649
-   34        833              188 (23%)      65 ( 8%)      486 (58%)
-   37         2              1 (50%)      1 (50%)
Total      3382726 (100%)

Mark to Display File Details

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

APFLOOK File Summary

The following fields are provided:

Field	Description
C	This field can be marked to display further details for a file.
Fnr	Adabas file number.
Total	The number of commands for this file, and the percentage of file commands to database commands.
Direct Access	The number of direct access commands for this file, and the percentage of potential optimization for direct access commands.
RC	The number of Release Command ID commands for this file, and the percentage of potential optimization for RC commands. The Adabas RC command releases one or more Command IDs currently assigned to a user. See the <i>Adabas Command Reference</i> documentation for more information. When a direct access command is optimized, it is often possible to optimize its matching RC command. The RCs column indicates the potential cases. RC commands cannot be optimized for sequential (that is, read-ahead) access.

Field	Description
Sequential	The number of sequential commands for this file, and the percentage of potential optimization for sequential commands.
Total (bottom of screen)	The total number of commands for all files.

In the above example, file 18 would be a prime candidate for optimization in that 91% of the database commands are for file 18. In addition, the sampling indicates that 16% of direct access commands and 84% of sequential access for file 18 can be optimized using Adabas Fastpath.

Further details for a file can be obtained by

- marking column C for the file, or
- entering 6.2.1 on any command line to display a previously accessed file.

The File Details screen will appear. This screen provides information for each command/descriptor pair which could be defined for Adabas Fastpath optimization.

```

12:32:21  ***** A D A B A S  FASTPATH SERVICES 8.1.2 *****                2006-05-19
          - Afplook - Details for DB 198  File 19 -                            F16210MA

          Started: May 19,2006 at: 12:30 by: UKDEV1

CC DE Direct Acc          RCs  Sequential  Sequences          Non-Qualifying
L3 KK      480777         415    2590506    480362          Updates 34
L1 --              2                                Inserts 1620
L9 KK              15            15          Deletes 1670
S1 KK              10            10

                                          Prefetch 0
                                          Excluded 2255
                                          Spare 0
                                          No CID 0
                                          Max.CIDs 0
                                          Bad Rsp. 0
                                          Max.Rec.Buff.Len
Total      480804          440    2590506                                Direct Acc 1120
Total Commands for File                                3071847          Sequential 1120

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

APFLOOK File Details Display

For information on how to interpret the above information, refer to the section APFLOOK.

AFPLOOK Summary Display

Selecting option code 3 from the AFPLOOK Services menu, or pressing PF10 from the Files Summary screen displays the AFPLOOK Summary screen.

This screen summarizes the potential for Adabas Fastpath optimization. It is important to note that whereas the estimates provided are useful in determining where optimization potential may exist, it cannot be guaranteed that this potential will always be attained to the extent estimated.

```

12:33:10  ***** A D A B A S  FASTPATH SERVICES 8.1.2  *****                2006-05-19
          - Afplook - Summary for DB 198 -                                F16300MA

          Afplook Started May 19,2006 at 12:30 by   UKDEV1

----- Potential Optimization Summary -----

          Sampled Commands                Potential Optimization

Sampled File Commands    3383333 (75%)  <=== Sequential:        2722211 (80%)
                               Direct Access:      579729 (17%)
                               RCs:                    58540 ( 2%)

Excluded Commands       1130492 (25%)

Totals                   4513825 (100%)                3360480 (74%)

-----

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

AFPLOOK Summary Display

Refer to the section AFPLOOK for descriptions of the statistics shown.

Pressing PF11 on the previous screen displays the Summary Command Analysis screen:

```

12:33:41 ***** A D A B A S FASTPATH SERVICES 8.1.2 *****                2006-05-19
          - Afplook - Summary for DB 198 -                                F16300MB

          Afplook Started May 19,2006 at 12:30 by UKDEV1

----- Command Analysis -----
Rejected Commands:
  Max.Users Exceeded:
  Max.CIDs Exceeded:
  Max.Files Exceeded:
Excluded Commands:
  Bad Commands:                365
  Non-File Commands:           1000944
  Non-File RCs:                 31309
  Excluded File Commands:       44988
  Update Commands:              52886
  Already Prefetched:           1130492 (25%)
Sampled File Commands:         3383333 (75%)
All Commands Seen:             4513825 (100%)

----- Parameters and High Water Marks -----
Max.Files: 64   Files Needed: 21   Max. DE: 32   Overflows:
Max.Users: 100 Peak Users: 9       Max.CID: 10   Peak CIDs: 5

Reused User Areas:

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

AFPLOOK Command Summary Display

This screen summarizes command processing and also displays the parameters that were used for the sampling session.

Refer to the section AFPLOOK for descriptions of the statistics shown.

10

Protecting AFP Information when using Adabas Utilities

- Using Adabas Utilities with Version 7.4.2 86
- Using Adabas Utilities with Previous Versions 86

Using Adabas Utilities with Version 7.4.2

The following Software AG products support automatic control of Adabas Fastpath data when an Adabas utility is operating:

- Adabas Cluster Services Version 7.2.2 (or above)
- Adabas Parallel Services Version 7.4.2 (or above)
- Adabas Version 7.4.2 (or above)

Using Adabas Utilities with Previous Versions

When using Adabas version 7.1, the Adabas Fastpath stop/start function must be used to protect databases and files when an Adabas utility is operating on that database/file.

Databases and files may be protected online using Adabas Fastpath Online Services (SYSAFP) or in batch mode using the Adabas Fastpath tool AFPCMD. The batch job name must be defined as a job parameter linked to the global buffer for which the operation is required.

The commands are as follows:

- For the whole buffer:

```
STOP BUFFER  
RESTART BUFFER
```

- For a database:

```
STOP DATABASE DBID=dbid  
START DATABASE DBID=dbid
```

- For an individual file:

```
STOP FILE DBID=dbid FNR=fnr  
START FILE DBID=dbid FNR=fnr
```