

## **Adabas Fastpath**

### **Adabas Fastpath Online Services**

Version 7.4.2

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This document applies to Adabas Fastpath Version 7.4.2 and to all subsequent releases.

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

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# 1 Adabas Fastpath Online Services

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This document describes Adabas Fastpath Online Services (SYSAFP).

- [Using Online Services](#)
- [System Settings](#)
- [Parameter Maintenance](#)
- [Buffer Statistics](#)
- [Buffer History](#)
- [Buffer Operations and Reporting \(APFCMD\)](#)
- [Special Services](#)
- [Optimization Sampling \(AFPLOOK\)](#)
- [Using Online Services with Natural Security](#)
- [Protecting AFP Information when using Adabas Utilities](#)



# 2 Using Online Services

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- Online Help ..... 7

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

## Online Services Main Menu

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▶ 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 7.4.2  *****                2003-05-15
                                                - 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
<b>System Settings</b>	Maintain Adabas Fastpath configuration file.
<b>Parameter Maintenance</b>	Maintain Adabas Fastpath optimization parameters.
<b>Buffer Statistics</b>	Display Adabas Fastpath buffer statistics.
<b>Buffer History</b>	Display Adabas Fastpath buffer history information.
<b>Printing</b>	Print Adabas Fastpath reports.
<b>Special Services</b>	Perform miscellaneous actions for the Adabas Fastpath components.
<b>Online Sampling (APFLOOK)</b>	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 7.4.2 - DEMO *****      2003-09-11
          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 7.4.2 ***** 2003-02-30
          - System Settings - F1000M1

          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          2003-02-30
          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
- Job Parameters ..... 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 7.4.2 *****          2003-02-30
          - Parameter Maintenance -                               F11000M1


          Code   Service
          ----   -
          1      Buffer Parameters
          2      File Parameters
          3      Job Parameters
          .      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](#)
- [Job Parameters](#)

 **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 7.4.2 *****          2003-05-15
          - 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
-   V742ME01  244   7421   V742GR01   8192    ON      ON
-   V742ME02  244   7422   V742GR01   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 <a href="#">Modifying Buffer Parameters</a> .
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                2003-05-15
      Add Buffer          F11110MB

Size(k)      : 4096

System Coordinator
Group Name   : V742GR01
Member Name  : X742ME03

(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 V742ME01.

```

12:08:05 ***** A D A B A S FASTPATH SERVICES 7.4.2 *****          2003-05-15
                - Buffer V742ME01 -                               F11120MA

System Coordinator Group Name: V742GR01   Member Name: V742ME01

Adabas SVC Number:      244           Designated DBID:           7421

Last Modified:          2003-05-12 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

Read-ahead Memory Sizes(k): 4   8   16   32

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

```

### Modify General Buffer Parameters

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:

```

12:09:42 ***** A D A B A S FASTPATH SERVICES 7.4.2 *****          2003-05-15
                Buffer V742ME01                               F11120MB

Adabas SVC Number:      244           Designated DBID:           7421

Last Modified:          2003-05-12 By User ID:           UKSJU
Last Buffer Address:    00000000   Length: 00000000   Session: 0

```

```

----- Detailed Parameters -----
Set Expansion:      8          Set Concurrency:      2
Freespace Index:  512        Average Item Size:    256
Log every n Minutes: 60      Keep for n Days:      30
Autorestart:      Y          Restart every n Hrs:  0

----- Global Operational Control -----
Direct Access:    ON          FIND      Sx/L1:          ON
Read-ahead:      ON          READ PHYSICAL L2:      ON
                                      READ LOGICAL  L3:      ON
                                      HISTOGRAM    L9:          ON

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

**Modify Detailed Buffer Parameters**

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 7.4.2 *****           2003-02-30
      - File Optimization Parameters for: Global AFP311A -           F11200MA

                                Start  End      Update
                                Time   Time    Sensitivity
C  DBID  File  SVC   Time   Time    Record
-   11   7    254   Time   Time    Record
-   12   7    254   Time   Time    Record
-   13   7    254   Time   Time    Record
-   14   7    254   Time   Time    Record

                                Reposition
                                DBID: _____
                                File:  _____
    
```

_	71	7	254				Record
_	111	66	254	12:00	16:00		Record
_	193	1					Record
_	193	2					Record
_	193	3					Record
_	193	4					Record
_	193	5					Record
_	193	7	254				Record

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                2003-05-15
                        F11210M1

Add File Optimization Parameter

Buffer Name:  V742ME01
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.  <b>Note:</b> 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.  <b>Note:</b> Normally, the SVC parameter is only used at OS/390, 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 PF4 . 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:

```

15:52:22 ***** A D A B A S FASTPATH SERVICES 7.4.2 *****                2003-02-04
      - File Optimization Parameters for: Global SYSC033 -                F11220MA

File: 7      DBID: 198      SVC: 254      Last Modified: 2003-02-20 by: UKYCL

Start Time (HH:MM): 06:30 End Time: 17:30      Update Sensitivity: R Record

Initial Status:      ON      Set Limit (k): 0      Set Expansion: 0
Set Id Length Limit: 0      RB Length Limit: 0      Set Concurrency: 0
Expanded File:      N      Synchronous Remote Updates:N

----- Optimization Summary -----
                Direct Access      +                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> .  <b>Note:</b> 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 Expansion 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.
Synchronous Remote Updates	Controls the mode used for synchronizing updates. See the parameter <code>Synchronous Remote Updates</code> .
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:  ■ direct access: L1, L3, L9, S1, S2 ■ read-ahead: L1, L2, L3, L9, S1, S2, S8, S9  <b>Note:</b> 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.

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:

```

16:12:41      ***** A D A B A S  FASTPATH SERVICES 7.4.2 *****                2003-02-04
              - File Optimization Parameters for: Global SYSC033 -                F11220MB

File: 7      DBID: 198   SVC: 254          Last Modified: 2003-02-04 By: UKDEV1

Start Time (HH:MM): 06:00 End Time: 19:30      Update Sensitivity: R Record
Initial Status:      ON      Set Limit (k): 0   Set Expansion: 0
Set Id Length Limit: 0      RB Length Limit: 0   Set Concurrency: 0
Expanded File:      N

----- 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
    
```

**Direct Access Optimization**

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	Description
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:

```

16:25:22   ***** A D A B A S  FASTPATH SERVICES 7.4.2 *****           2003-02-04
          - File Optimization Parameters for: Global SYSC033 -           F11220MC

File: 7      DBID: 198   SVC: 254           Last Modified: 2003-02-04 by: UKDEV1

Start Time (HH:MM): 06:00 End Time: 19:30   Update Sensitivity: R Record
Initial Status:      ON    Set Limit (k): 0      Set Expansion: 0
Set Id Length Limit: 0    RB Length Limit: 0    Set Concurrency: 0
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.

## Job Parameters

Selecting option 3 from the Parameter Maintenance screen or entering 1.3 on a command line displays the Maintain Job Parameters screen:

```

12:38:54  ***** A D A B A S  FASTPATH SERVICES 7.4.2  *****                2003-05-15
          - Maintain Job Parameters List -                                     F11300M1

                                                                 <-Reposition->
                                                                 Type: _____
                                                                 Name: _____

C Job Type      Job Name      System Coordinator (Buffer) Group Name  Comment  Time period
_ Batch         V742DA2F     AFPGROUP
_               V742DA3F     AFPGROUP
_               V742JB01     V742GR01
_               V742JB02     V742GR01
_               V742JB03     V742GR01
_ CICS Cluster  CICS0414     MROJOB01
_               CICS0514     V742GR01
_               DAEFCIUK     V742GR01
_ TSO           *DEFAULT     BIGBUFF
_ TIAM          TESTTIAM     BIGBUFF

Mark with D(isplay),M(odify),P(urge),R(ename),C(opy)
End of List
Command ==>

```

```

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

### Maintain Job Parameters

The following information is provided:

Field	Description
C	Option code (display, modify, purge, rename, copy). For more information on the Modify function, see <a href="#">Maintaining Job Parameters</a> .
Job Type	The job type.
Job Name	The job name.
Group Name	The name of the Adabas System Coordinator group in which this buffer is a member.
Time period	Optimization for this job is only to be in effect within the specified time window. See parameter <code>Start Time</code> .  <b>Note:</b> You can enable optimization for a different time window by creating a different parameter set for this job. This allows you to specify different override parameters for a job to be used at different times of the day, perhaps even for different Adabas Fastpath buffers.

Press PF8 to move to the next page, or enter the "Reposition Type and Name" to position anywhere within the list.

Press PF10 to add a new job.

Press PF11 to list all defined job parameters including those for Adabas Transaction Manager (ATM) and Adabas Vista (AVI).

### Adding Job Parameters

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

```

09:21:16      Add      2003-05-16
              Job Parameters  F11310MC

Job Name: KM27WD__
(D = Default for Job Type)

      X  Batch
      _  COM-LETE
      _  CICS Cluster
      _  CICS
      _  IMS/DC
    
```

```

      _   UTM
      _   TSO
      _   CMS
      _   TIAM
      _   None above
Mark to Select a Job Type

Command ==>
          PF1 Help      PF3 Exit

```

### Select Job Type

Job Name	<p>The job name.</p> <p><b>Note:</b> A default job definition may be created by specifying a D as the name and selecting the appropriate job type.</p> <p><b>Note:</b> A job name can include one or more asterisks (*) to indicate a wild card. For example, the job parameter with the name CICS**PR is found by any job with the name CICS in positions 1-4 and PR in positions 7-8, no matter what the characters are in positions 5-6. If an asterisk (*) is the last character in a job name, the remainder of positions in the name through the eighth are padded with asterisks.</p>
Job Type	<p>The job type. Each different job type has a different characteristic so it is important to select the correct type.</p> <p><b>Note:</b> If you are using CICS/MRO with dynamic transaction routing, or CICSplex, you must select the job type CICS Cluster. The standard CICS job type is used for CICS/MRO without dynamic transaction routing or for other CICS environments.</p> <p><b>Note:</b> 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, the corresponding screen for that job type will appear. In this example, a batch type job is being defined.

```

09:21:41      Add      2003-05-16
              Job Parameters  F11310M1

Job Type: Batch
Job Name: KM27WD
(D = Default for Job Type)
Fastpath ON/OFF for Job: ON

Buffer Group Name: SYSC033
Leave empty to select)

```

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

----- Daemon Mode -----
(Usually for Clustered Applications)
Service Name: _____
Coordinator Group Name: _____

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

**Add a Job Parameter**

Job Type / Job Name	The job type and job name.
Fastpath ON/OFF	Indicates whether or not optimization is to be in effect for this job.
Buffer Group Name	The name of the Adabas Fastpath buffer to be used by this job.
Optional Time Window	<p>Optimization is to be in effect for this job only if the job is started within the time window specified.</p> <p>Time windows are checked <i>when a job starts</i>. If the job starts</p> <ul style="list-style-type: none"> <li>■ within the start/end times, it is optimized.</li> <li>■ any time outside of the start/end time, it is not optimized.</li> </ul> <p>Once started, optimization continues until the end of job; there is <i>no check at the end time</i>. It is therefore recommended that a time window is <i>not</i> used for TP monitors or other long running jobs.</p> <p><b>Note:</b> Time windows may be defined for default or specific job definitions. A definition <i>without a time window</i> takes precedence.</p>
Service Name Coordinator Group Name	The job types CICS Cluster, IMS, and UTM are considered to be clustered applications and must be accompanied by the Coordinator Group Name and Clustered Application Service Name. To select an existing Coordinator Group Name from a list, press PF1 with the cursor in the field.

Normally, the absence of job parameters 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. Default job parameters can be created 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 Job Parameters

To maintain job parameters, on the Maintain Job Parameters 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 7.4.2 *****          2003-05-16
                                     - Job Parameters -                               F11320M1

Job Name: KM27WD                               Last Modified: 2002-05-28
Job Type: Batch                               by Userid: UKSJU

System Coordinator
(Buffer) Group Name.: SYSC033

Start Time(HH:MM)...:                          End Time(HH:MM):

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

Read-ahead Optimization Control: BAT           Command Time...: 00000000

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

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

```

### Detailed Job Parameters

Parameter	Description
Start Time / End Time	<p>Optimization is to be in effect for this job only if the job is started within the time window specified.</p> <p>Time windows are checked <i>when a job starts</i>. If the job starts</p> <ul style="list-style-type: none"> <li>■ within the start/end times, it is optimized.</li> <li>■ any time outside of the start/end time, it is not optimized.</li> </ul> <p>Once started, optimization continues until the end of job; there is <i>no check at the end time</i>. It is therefore recommended that a time window is <i>not</i> used for TP monitors or other long running jobs.</p>

Parameter	Description
	<p><b>Note:</b> Time windows may be defined for default or specific job definitions. A definition <i>without a time window</i> takes precedence.</p> <p><b>Note:</b> You can enable optimization for a different time window by creating a different parameter set for this job. This allows you to specify different override parameters for a job to be used at different times of the day, perhaps even for different Adabas Fastpath buffers.</p>
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.

Press PF10 to maintain the related Adabas System Coordinator parameters as follows:

```

17:48:02   System Coordinator Parameters      2003-05-16
                                                U1SCJPM1

Estimated Client Sessions   : 2
Fixed Memory Pool Size(k): 256

Managed by Daemon.....: N (Y/N)
  Daemon Group Name.....: _____
  Clustered Application Service Name...: _____
  Daemon manages Terminal Sessions only: X
    or manages All Sessions.....: _
                                Mark One

PF1 Help   PF3 Exit   PF5 Upd
    
```

**System Coordinator Parameters**



The following parameters apply to all job types:

Parameter	Description
Estimated Client Sessions	Determines the size of the Adabas System Coordinator user pool.
Fixed Memory Pool Size(k)	Determines the size of all fixed memory pools.

The following parameters are mandatory for clustered applications (job types CICS/MRO and CICSplex; IMS/TM and IMSplex; and UTM) or for those jobs that have been explicitly defined to be managed by the Adabas System Coordinator daemon. Either type can be identified by the fact that they have the parameter Managed by Daemon set to Y.

Parameter	Description
System Coordinator Group Name	Used to link the clustered application to the relevant Adabas System Coordinator group.
Clustered Application Service Name	Used to group together all instances of the application with the Adabas System Coordinator.
Manage Terminal Sessions or Manage All Sessions	Used to determine the type of sessions that will be managed by the Adabas System Coordinator daemon.

Refer to the *Adabas System Coordinator* documentation for more information.



# 5 Buffer Statistics

---

- Buffer Statistics and Interaction Menu ..... 32
- Buffer Information ..... 33
- Database and File Information ..... 37
- Job Information ..... 48
- System Job Information ..... 52

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

## Buffer Statistics and Interaction 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 Buffer Statistics and Interaction menu is then displayed.

```
17:40:46  ***** A D A B A S  FASTPATH SERVICES 7.4.1  *****                2003-02-04
          - Buffer Statistics and Interaction -                                F12000M1

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

Code ...: _

          ABM Node ID: 33      SYSC033
          Status: Active
          Started Feb  4,2003 at 12:56

          Job Connection Status: Connected to SYSC033

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

### Buffer Statistics and Interaction

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 <b>Note:</b> You can display buffer information for a different Node ID by entering the corresponding Node ID in this field. <b>Note:</b> 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.
Job Connection Status	The FASTABM/System Coordinator group member to which this job is connected.

## 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.

```
17:49:00 ***** A D A B A S FASTPATH SERVICES 7.4.1 *****          2003-02-04
          - General Information -                                     F12100MA
```

```
Buffer Type: Global      Name: SYSC033          SVC: 240 DB: 33
Connected to:
Started: Feb 4,2003 at: 12:56      Buffer Status : Active
Address: 099D3000 Size(k): 1024    Ave Memory Val: 12
                                      Session Number: 111
```

```
----- Buffer Statistics -----
```

Access Type	Attempts (13%)	Successes (66%)
Read-ahead:	3,586 (10%)	2,892 (80%)
Direct:	1,291 (3%)	342 (26%)
RCs:	49 (0%)	49 (3%)
Excluded:	28,325 (87%)	

```

Total:                33,251 (100%)                3,283 (9%)
-----
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12
      Help      Exit Refr  Serv  Excl                Parm Zero Node Menu
    
```

**General Information**

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

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

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

Field	Description
Access Type	Attempts: the percentage of optimization attempts (opimization attempts divided by total number of commands). Successes: the percentage of successful optimization attempts (successful optimization attempts divided by number of optimization attempts).
Read-Ahead	Attempts: the number of read-ahead optimization attempts, and the attempt percentage (read-ahead optimization attempts divided by total number of commands). Successes: the number of successful read-ahead optimization attempts, and the percentage of successful attempts (successful read-ahead optimization attempts divided by read-ahead optimization attempts).
Direct	Attempts: the number of direct access optimization attempts, and the attempt percentage (direct access optimization attempts divided by total number of commands). Successes: the number of successful direct access optimization attempts, and the percentage of successful attempts (successful direct access optimization attempts divided by direct access optimization attempts).

Field	Description
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).  <b>Note:</b> 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:

```

17:49:50 ***** A D A B A S FASTPATH SERVICES 7.4.1 *****                2003-02-04
          - Excluded Command Analysis -                                     F12100ME

          Buffer: Global SYSC033 Node Id: 33

          Excluded:- Reasons          Number  +-----+-----+
          Job area not avail.         | Direct not Optimized      Number  |
          Not Fastpath command        | Repo. size overflow       |
          DBID not qualified           | Concurrency clash         |
          DB list overflw              | Startup/set off/rej       | 185   |
          File not qualified           | DA set not found          | 436   |
          Misc/temp off switch         | DA data not in set        | 291   |
          User area shortage           | RBL exceeds maximum       | 41    |
          Non-AFP CB settings          |                             |
          CID area shortage            |                             |
          M/fetch already used         | Read-ahead Not Optimized  |
          SetId length exceed          | Memory shortage           |
          Desc. not qualified           | Read-ahead primer         | 694   |
          FB/SB not recognised         | Sx command ignored        |
          Unknown status               |                             |
          Sequence detection           |                             | 8     |
          +-----+-----+

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

### Excluded Command Analysis

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.
Direct Not Optimized	The number of direct access commands that were attempted but could not be optimized for the listed reasons. For more information, see Excluded Commands.
Read-Ahead Not Optimized	The number of read-ahead commands that were attempted but could not be optimized 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

```

16:32:58 ***** A D A B A S FASTPATH SERVICES 7.4.1 - DEMO *****      2003-02-05
          - General Parameters -                                           F12100MF

          Buffer: Global SYSC033 Node ID: 33

Main Parameters      Value      Initial      Peak Usage      Commands
Size(k)..Min: 1024   4096         4096          98%              Ignored
Maximum Jobs:         12              1              0
RB Length Limit:     2048              0
Set Length Limit:    1024              0
Read-ahead Memory Sizes(k):  4   8   16   32

Other Parameters      Value      Value
Direct Set Expansiom:  8          Set Concurrency:  2
Freespace Index Entries: 1024      Average Item Size: 256

Log every n minutes:  60          Keep for n days:  30
Autorestart:         Y           Restart every n Hrs:  0
Direct Access:       ON          Read-ahead Processing:  ON
FIND      SX/L1:     ON          READ PHYSICAL L2:    ON
READ LOGICAL L3:    ON          HISTOGRAM    L9:     ON

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

### Parameter Display



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

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

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

## Database and File Information

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



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

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

```

10:25:30      ***** A D A B A S  FASTPATH SERVICES 7.4.1 *****                2003-02-05
              Database Summary from Global SYSC033 Node ID 33                F12200MA

Buffer Session: 111                Started: Feb  4,2003 12:56   Size(k): 1024

  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
```

**Database Summary**

The following information is provided on this screen:

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

**Database Services**

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

```
10:27:51          2003-02-05
                F12200MC

Stop/Start Optimization
for: Database 198

S Stop Optimization
R Start Optimization
. Exit
```

Code...:

Command ==&gt;

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.

```

10:29:44 ***** A D A B A S FASTPATH SERVICES 7.4.1 *****
          Database Details from Global SYSC033 Node ID 33
                                     2003-02-05
                                     F12200MB

          Database: 198   SVC: 240

----- Optimization Summary -----
Access Type           Attempts (98%) <-----Successes (67%)

Read-ahead:           3,676 (64%)           2,938 (79%)
Direct:                1,953 (34%)           853 (43%)
RCs:                   53 (0%)             53 (2%)
Excluded:              31 (0%)

Total:                 5,713 (100%)       3,844 (67%)

-----
Updates:                11   Over-reads:           91 (3%)

Status 1: 40 0C 20 10 Bad Response:   Lock: 00000000 DBE Addr: 099F07C0
ADABAS Vers: 710      Hex: 07010200   Location: 040000FF
DBID from GCB: 198   Nuc ID: 198

Command ==>

```

```

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

**Database Details**

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:

```

10:31:15  ***** A D A B A S  FASTPATH SERVICES 7.4.1 *****          2003-02-05
          Database Details From Global  SYSC033 Node Id 33          F12200MG

          Database: 198   SVC: 240

          Excluded:- Reasons      Number | Direct not Optimized      Number |
          Misc/temp off switch    4    | Repo. size overflow       |
          User area shortage      | Concurrency clash         |
          Non-AFP CB settings     3    | Startup/set off/rej       185   |
          CID area shortage       | DA set not found          436   |
          M/fetch already used    | DA data not in set        398   |
          SetId length exceed     | RBL exceeds maximum       86    |
          Desc. not qualified     10   |
          FB/SB not recognized    +-----+
          Unknown status          5    | Read-ahead Not Optimized  |
          Sequence detection      8    | Memory shortage           |
          |                       | Read-ahead primer         738  |
          |                       | Sx command ignored        |
    
```


```

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

```

### Database Excluded Count Analysis

The information is provided in the same format as that provided at the buffer level (see section [Buffer Information](#)), with the exception that the first five excluded reasons are not shown because commands excluded for those reasons do not appear at the database level.

 **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.

```

10:32:21   ***** A D A B A S  FASTPATH SERVICES 7.4.1 *****           2003-02-05
           File Summary from Global SYSC033 Node Id 33                F12210MA

           Database: 198   SVC 240

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              Gen              Zero  Node  Menu

```

### File Summary

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.

```

10:33:26 ***** A D A B A S FASTPATH SERVICES 7.4.1 *****                2003-02-05
          File Details from Global SYSC033 Node Id 33                        F12210MB

          Database: 198   SVC 240 File: 7

----- Optimization Summary -----
Access Type      Attempts (99%) <-----Successes (69%)
Read-ahead:      2,921 (79%)                2,508 (85%)
Direct:          740 (20%)                  15 (2%)
RCs:             13 (0%)                 13 (1%)
Excluded:        12 (0%)

Total:           3,686 (100%)          2,536 (68%)

-----
Updates:                               Over-reads:      57 (2%)

Set Limit(k): 1024      Set Expansion: 8      Update Sensitivity: R
Set Id Length Limit: 1024  RB Length Limit: 2048  Set Concurrency: 2
Status: 00 D4 Last RC:   Next Event: 0:00     Addr: 099F29C0

Command ==>
    
```

```

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

```

### File Details

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 7.4.1 *****                2003-02-05
          - 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.

```
10:38:27 ***** A D A B A S FASTPATH SERVICES 7.4.1 ***** 2003-02-05
          Set Summary from Global SYSC033 Node Id 33 F12220MA

          Database: 198 SVC 240 File: 19

          Number of Items.... Memory (k).... Efficiency Ratings
          C CC De Sets In Use Peak Optimized In Use Peak Set Memory Growth
          _ L1 2 5 24 25 5 27 9 5 0.13
          _ L3 KK 3 10 32 75 12 39 5 6 0.15
          _ S1 KK 2 19 40 772 2 21 9 386 10.15
          _ L3 KK 1 8 5 5 9 5
```



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  Parm  Look      Cntl  Node  Menu

```

## File Set Summary List

The following information is provided:

Field	Description
C	Option code. The following options are available: d: display detailed set information f: display full set list
CC De	The Adabas command/descriptor pair for which information is provided.
Sets	The number of sets that have been added together to make the summary.
Number of Items	The number of items (records) in use at the present time, the peak number of items used, and the number of times items in the set were used for optimization.
Memory	The memory in use to hold the data in the sets (in k) and the peak memory usage for all sets.
Efficiency Ratings	<p>Set Efficiency. The nominal CPU effort needed to maintain the set(s) (for example, adding, removing, overwriting) versus the CPU effort saved by optimization. The rating is on a scale of 0 to 9, where 0 means that the set(s) are estimated to use more CPU in maintenance than it gains by optimization.</p> <p>Memory. The number of commands optimized for the set(s) divided by the memory used. The higher the rating (maximum 9999), the better the value of the set(s) in terms of memory usage.</p> <p>Growth Rating. A ratio of the memory value rating to the average memory value for the whole Adabas Fastpath buffer. A rating of 1.00 is average. Adabas Fastpath uses this rating to increase set expansion for sets above average (&gt; 1.00) and to restrict expansion for below average sets.</p>

## 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.

```

10:39:56 ***** A D A B A S FASTPATH SERVICES 7.4.1 *****                2003-02-05
          Set Summary from Global SYSC033 Node Id 33                          F12230MA

          Database: 198   SVC 240 File: 19   CC: L3 De: KK

          Number of Items.....          Memory (k).....  Efficiency Ratings
C  SSID      In Use      Peak  Optimized  In Use  Peak  Set Memory Growth
-   3         4         16    45         4      19    5    11  0.28
-   5         6         8     30         7      10    7     4  0.10
-   7         8         8

```

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

**File Set List for Command/Descriptor**

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.
Sets ... Ratings	The remaining fields on this screen are as described in the previous section <a href="#">File Set Summary</a> .

## 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:

```

10:40:31 ***** A D A B A S FASTPATH SERVICES 7.4.1 *****                2003-02-05
          Set Detail from Global SYSC033 Node Id 33                            F12230MB

          Database: 198   SVC 240 File: 19

Command: L3   Primary Descriptor: KK   SSID: 3

Efficiency Ratings:  Set:  5 Memory:      11 Growth:      0.28
Items - Optimized:   45 Added:      15 Collisions:
Current:             4 Peak:      16 Free:      12
Removed:            11 RLU:      11 Overwrites:
                               Set Resets:

Memory - Used(k):    4 Peak(k):      19 Free(k):      14
Status:  00 C8 0E 08 Expansion:    16 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

```

## Set Detail

The following information is provided:

Field	Description
Efficiency Ratings	<p>Set Efficiency. The nominal CPU effort needed to maintain the set(s) (for example, adding, removing, overwriting) versus the CPU effort saved by optimization. The rating is on a scale of 0 to 9, where 0 means that the set(s) are estimated to use more CPU in maintenance than it gains by optimization.</p> <p>Memory. The number of commands optimized for the set(s) divided by the memory used. The higher the rating (maximum 9999), the better the value of the set(s) in terms of memory usage.</p> <p>Growth Rating. A ratio of the memory value rating to the average memory value for the whole Adabas Fastpath buffer. A rating of 1.00 is average. Adabas Fastpath uses this rating</p>

Field	Description
	to increase set expansion for sets above average (> 1.00) and to restrict expansion for below average sets.
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. 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 ... Reject	These fields are reserved for Software AG use.

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.

```

14:37:30 ***** A D A B A S FASTPATH SERVICES 7.4.1 - DEMO ***** 2003-02-04
- Job Summary for Global SYSC033 Node ID 33 - F12300MA

Buffer Session: 3 Started: Feb 4,2003 13:59 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
- GXNDCP72 B41763 Batch Disconnected
- GXNDCP72 B41766 Batch Disconnected

Mark with D(etail),S(ervices)

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

### Optimized Job Summary

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).  <b>Note:</b> 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.

```

10:52:46 ***** A D A B A S FASTPATH SERVICES 7.4.1 *****                2003-02-05
- Job Details from Global SYSC033 Node ID 33 -                               F12300MB

Job: DAEFCODE Type: COM-LETE Number: C30694          Started: Feb  5,2003 10:02

----- Optimization Summary -----
Access Type      Attempts  (4%) <-----Successes  (73%)
Read-ahead:      85      (1%)                45  (52%)
    
```

## Buffer Statistics

Direct:	173 (3%)	143 (82%)
RCs:	6 (0%)	6 (3%)
Excluded:	4,161 (96%)	
Total:	4,425 (100%)	194 (4%)
-----		
Memory(k):	RA Memory:	Over-reads: 6
Status: 00 00 00 00	System ID: DAEFCODE	Area Address: 099E28C8
Command ==>		
Enter-PF1---	PF2---	PF3---
PF4---	PF5---	PF6---
PF7---	PF8---	PF9---
PF10--	PF11--	PF12
Help	Exit Refr	Excl
	More	Zero Node Menu

## Job Details

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.

```

10:55:07 ***** A D A B A S FASTPATH SERVICES 7.4.1 *****                2003-02-05
Job Details from Global SYSC033 Node Id 33                                F12300MC

Job: DAEFCODE Type: COM-LETE Number: C30694                Started Feb  5,2003 10:02

Job Information-----
Peak Concurrency...: 2
User Areas:  In Use: 2                Peak: 2                Recovered: 0
CID Areas:  In Use: 0                Peak: 3

```

```

Read-ahead Memory Categories-----
  Size(k):  1 Peak No: 0      Usage.: 8      Failures: 0
            2          0          1          0
            4          0          0          0
            8          0          0          0

Job Parameters-----
          Job End Stats.: N      Direct Access: ON
          Start Time.....: 00:00      End Time.....: 00:00

Read-ahead Optimization Control: TP      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

```

## Job Details 2

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 (Job Parameters) contains the current values for the job parameters. See the section Adabas Fastpath Parameters for descriptions of these parameters.



**Note:** The job parameters 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.

```
10:56:03 ***** A D A B A S FASTPATH SERVICES 7.4.1 ***** 2003-02-05
          System Job Summary for Global SYSC033 Node ID 33          F12400MA

Buffer Session: 111          Started: Feb 4,2003 12:56          Size(k):1024

C   Job Name   Number   Job Type   SVC   DB   Nuc ID   Status
-   SYSC033   C21567   AFPABM
-   NUC193    C21002   AFPADA    254   193   193     Active
-                                     Unused

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
```

### System Job Summary



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  <b>Note:</b> These services are described in the section <a href="#">Special Services</a> .
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 7.4.1 *****      2002-09-05
                - Buffer History -                                     F13000MA


                Please mark to select Buffer for History Display

                _ AFP721A      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 7.4.1 *****                2002-09-05
              - Buffer History Available for Global SYSC033 -                F13100MA

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

___ 42      Jul 19,2002 12:38 E
___ 43      Jul 19,2002 12:55 E
___ 44      Jul 19,2002 15:27 E
___ 45      Jul 19,2002 16:09 E
___ 46      Jul 19,2002 17:08 E
___ 47      Jul 19,2002 17:45 E
___ 48      Jul 19,2002 17:48 E
___ 49      Jul 23,2002 11:07 E          144          97          140          80
SS 50      Jul 23,2002 12:14          147          51          168          96
___ 50      Jul 23,2002 13:14          193          129         182          104
SS 50      Jul 24,2002 14:14 E          364          256         360          234
___ 51      Jul 25,2002 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 7.4.1  *****                2002-09-05
          History Interval - Jul 23,2002 12:14 to 14:14                F13110MA

  Buffer Type: Global      Name: SYSC033          SVC: 240 DB: 33
  Connected to:                               Buffer Status : Active
  Started:   Jul 23,2002  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:

```

11:07:11 ***** A D A B A S FASTPATH SERVICES 7.4.1 *****                2002-09-05
          - Buffer History - Logged Jul 23,2002 12:14 -                          F13110MA

Buffer Type: Global      Name: SYSC033          SVC: 240 DB: 33
Connected to:                               Buffer Status : Active
Started:   Jul 23,2002   at: 11:14             Ave Memory Val: 51
Address:   099CB000 Size(k): 1024             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 ..... 60

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 7.4.1  *****                2002-09-05
          - On-Line Printing Facility -                F14000MA

Please enter the following to specify the required report:

Command: _____ DISPLAY, LIST, PARMS

Objects: _____ BUFFER, JOB, AFLOOK, 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.

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

---

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- Asynchronous Buffer Services ..... 65
- Database Component Services ..... 66
- Local Services ..... 67

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 7.4.1  *****                2002-09-05
                                                - 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                2002-09-05
                        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.
S: Stop	Terminate the buffer in an orderly fashion.
N: Newcopy	Reload the Adabas Fastpath modules for the buffer and every other component connected to the buffer. AFPABM also performs a buffer restart.
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.
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                2002-10-30
                        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"> <li>■ If the Node ID is known, a screen follows showing a cluster map for the database.</li> <li>■ If the Node ID is not known, you must enter it in this field.</li> </ul>
Option Codes	The following option codes may be used:  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.

Field	Description
	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.

## 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                2002-09-05
                        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:

Field	Description
Local Job	The local job for which the request is to be made.
Option Codes	The following option codes may be used:  Z: Zap Information. Displays the numbers of ZAPs that have been applied to the Adabas Fastpath nucleus being accessed from the local job. I: Connection Information. Displays connection information for the job.

Field	Description
	<p>S: Job Statistics: Displays statistics for the local job even if it is not connected to a buffer (read-ahead optimization may be active).</p> <p>C: Reconnect. Attempts to connect to a buffer for the local job.</p> <p>D: Disconnect. Disconnects from the buffer for the local job.</p> <p>N: Newcopy. Temporarily disconnects the local job before reloading the Adabas Fastpath modules. Software AG does not recommend using Newcopy from Local SYSAFP Services. The preferred method is to use Newcopy from Asynchronous Buffer Services.</p>

### ZAP Information

The following screen is an example of the ZAP information that can be retrieved from any of the Service options:

```

11:17:32  ***** A D A B A S  FASTPATH SERVICES 7.4.1 *****                2002-09-05
          -  Display ZAP IDs (AFPIDnnn) from DAEFCODE          -                F1ZAPDM1

Version: AFP 7.2                                         Last Assembly Date: 08/02/01

--- 002 --- 004 --- --- 007 --- --- --- --- 012 --- --- --- ---
--- --- --- --- --- --- --- --- --- --- --- --- --- ---
--- --- --- --- --- --- --- --- --- --- --- --- --- ---

Enter ZAP number for details: ____

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

### ZAP Information

This information is useful for checking the ZAPs that have been applied to the Adabas Fastpath modules, as used by the selected service option.

By entering a ZAP number, you can see the ZAP details that have been applied, but only the part relevant to the AFPZAP module.

PF9 can be used to display the ZAPs applied to the modules common to all Adabas options.



## 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 7.4.1 *****                2002-09-05
          - 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
AFPKNR          90B29BB0          FNR: 19
AFPDEP          00399578          Buffer: SVC: 240       DB: 33
AFPFCFG          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.
AFPKNR / AFPDEP / AFPFCFG	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:

```

11:19:30 ***** A D A B A S FASTPATH SERVICES 7.4.1 *****                2002-09-05
                - Local Job Statistics -                                F15310MA

Job: DAEFCODE Type: COM-LETE Number: C30694          Started: Sep  5,2002 10:02

----- Optimization Summary -----
Access Type           Attempts (100%) <-----Successes (85%)

Read-ahead:           896 (100%)                765 (85%)
Direct:                (0%)                    (0%)
RCs:                  (0%)                    (0%)
Excluded:             (0%)                    (0%)

Total:                896 (100%)                765 (85%)

-----
Memory(k): 368          RA Memory:          Over-reads:

Status: 00 1E 00 A0    System Id: DAEFCODE    Area Address: 10996664

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

### Local Job Statistics Screen

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 (APFLOOK)

---

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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 7.4.1 - DEMO ***** 2002-10-30
- 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 Oct 29,2002 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><b>Note:</b> 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"> <li>■ the number of the database for which AFPLOOK is currently active. This number may have been carried forward from a previous action.</li> <li>■ the name of the database job.</li> <li>■ the AFPLOOK status.</li> <li>■ the user who started AFPLOOK for the database, and when it was started (date and time).</li> </ul>
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 APFLOOK Session

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

```

16:36:23 ***** A D A B A S FASTPATH SERVICES 7.4.1                2002-09-13
          - 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 APFLOOK 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 7.4.1 *****      2002-09-05
                Afplook - Files Summary for DB 198                      F16200MA

                Started: Sep  5,2002 at: 12:30 by: UKDEV1

  C   Fnr      Total          Direct Access          RCs          Sequential
  -   -
  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	<p>The number of Release Command ID commands for this file, and the percentage of potential optimization for RC commands.</p> <p>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.</p>
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 7.4.1 *****                2002-09-05
          - Afplook - Details for DB 198   File 19 -                          F16210MA

          Started: Sep  5,2002 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
Total Commands for File          3071847          Direct Acc 1120
                                     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.

**APFLOOK Summary Display**

Selecting option code 3 from the APFLOOK Services menu, or pressing PF10 from the Files Summary screen displays the APFLOOK 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 7.4.1 *****                2002-09-05
          - Afplook - Summary for DB 198 -                                     F16300MA

          Afplook Started Sep  5,2002 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 7.4.1 *****                2002-09-05
          - Afplook - Summary for DB 198 -                                     F16300MB

          Afplook Started Sep  5,2002 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           Reused User Areas:
Max.Files: 64   Files Needed: 21           Max. DE: 32   Overflows:
Max.Users: 100  Peak Users: 9             Max.CID: 10   Peak CIDs: 5

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 Using Online Services with Natural Security

---

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- Security Subprogram ..... 85

Adabas Fastpath Online Services is designed so that functions can optionally be secured by Natural Security. The modules are written exclusively in Natural and each module name conforms to the following format:

*Flnnnnta*

where

<i>l</i>	is the language type (initially with a value of "1" for English).
<i>nnnn</i>	is the module number.
<i>t</i>	is the module type (for example, P for program, S for subroutine).
<i>a</i>	is a further qualifier (for example, where several maps are used).

The Natural modules for Adabas Fastpath Online Services are supplied in two libraries: SYSAFP and SYSMWvrs. Thus, each new system maintenance level introduces a new library name.

The modules that control the version library are supplied in SYSAFP and everything else is supplied in the version library SYSMWvrs.

## Security Table

The following table lists all the Adabas Fastpath Online Services functions, objects, and subfunctions, together with the names of the Natural objects that perform the function. You can use this list to apply Natural Security on a function level, if required.

Function	Object	Subfunction	Program	Command
Versioning	Menu (on SYSAFP)		Menu	MENU (on SYSAFP)
Main	Menu (on SYSMWvrs)		Menu	MENU (on SYSMWvrs)
	LFILE Maintenance		F10000P	0
Parameter Maintenance	Menu		F11000P	1
	Buffer	List	F11100P	1.1
		Add	F11110P	1.1.1
		Modify	F11120S	Not possible
		Display	F11130S	
		Purge	F11140S	
		Rename	F11150S	
		Copy	F11160S	
	File	List	F11200P	1.2
		Add	F11210P	1.2.1

Function	Object	Subfunction	Program	Command	
		Modify	F11220P	1.2.2	
		Display	F11230S	Not possible	
		Purge	F11240S		
		Copy	F11260S		
	Job			F11300P	1.3
		Add		F11310P	1.3.1
		Modify		F11320S	Not possible
		Display		F11330S	
		Purge		F11340S	
		Rename		F11350S	
	Copy		F11360S		
	Current Buffer Statistics and Interaction	Menu		F12000P	2
		Buffer	Display	F12100P	2.1
Database		F12200P		2.2	
File		F12210P		2.2.1	
Set Summary		F12220P		2.2.2	
File Sets		F12230P		2.2.3	
Database		Stop/Start		F12260S	Not possible
File			F12240S		
File Sets			F12250S		
Job			Display	F12300P	2.3
			Stop/Start	F12310S	Not possible
System Jobs		Display	F12400P	2.4	
Buffer History	Menu		F13000P	3	
	List	Display	F13100S	Not possible	
			F13110S		
	Purge	F13120S			
AFPCMD	Menu		F14000P	4	
Special Services	Menu		F15000P	5	
	Buffer	Menu	F15100P	5.1	
	Database Local	Menu	F15200P	5.2	
		Menu	F15300P	5.3	
		Zap	F15310S	Not possible	
		Reconnect	F15320P	5.3.2	
AFPLOOK	Menu		F16000P	6	
	Start		F16100P	6.1	

Function	Object	Subfunction	Program	Command
	Display	File List	F16200P	6.2
		File	F16210P	6.2.1
		Summary	F16300P	6.3
	Stop		F16400P	6.4
	Release		F16500P	6.5
About Fastpath	List Messages		F17000P	7
AFPCMD	Menu		AFPCMDF18000P	AFPCMD
	List	Job	F18110P	Not possible
		Database	F18120P	
		File	F18130P	
		Set	F18140P	
		Summary	F18150P	
	Display	Buffer	F18280P	
		Job	F18210P	
		Database	F18220P	
		File	F18230P	
		Set	F18240P	
		Summary	F18250P	
		AFPLOOK	F18290P	
		Trace	F18270P	
		All	F18260P	
	Stop/Restart	Buffer	F18510P	
	Stop/Start	Job	F18520P	
		Database	F18530P	
		File	F18540P	
	Parms	Buffer	F18310P	
		Job	F18320P	
		File	F18330P	



## Security Subprogram

The Natural subprogram U1SECSN1 is called to check security prior to the execution of various functions. This subprogram is supplied in source form on the Natural library SYSAFP to allow user-controlled extension of security checking for specific objects.

U1SECSN1 is called at specific places within the system whenever an action is about to take place. If the return code is not hexadecimal FF, error number 68 is displayed.

This subprogram is not intended for function checking where Natural Security can be successfully used.

The following table illustrates the security possibilities:

Type	Action	Name	SVC	DBID	FNR	Type
Buffer	Add Modify Purge Services	Buffer Name				
File and File Sets	Add Modify Purge Services	Buffer Name	Optional	Yes	Yes	
Job	Add Modify Purge Services	Job Name				Job Type
AFPADA	Services AFPLOOK		Optional	Yes		



**Note:** Software AG accepts no responsibility or liability for the effect of user changes on the subprogram U1SECSN1.



# 11 Protecting AFP Information when using Adabas Utilities

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## 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
```

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---

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