Optimization Sampling (APFLOOK)

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

- Starting an AFPLOOK Session

- AFPLOOK File Summary

- AFPLOOK Summary Display

AFPLOOK Menu

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

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


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

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



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

AFPLOOK Menu

The following fields are provided:

Field	Description
Code	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. **Note:** Adabas Fastpath automatically detects when a database supported by a cluster of Adabas nuclei, either in a single operating system image (ADASMP) or across multiple operating system images (Adabas Cluster Services), has been selected for AFPLOOK. In this case, a separate menu screen is displayed so that you can indicate which nucleus is to be used.
DB ID / Status / User	These fields contain: • the number of the database for which AFPLOOK is currently active. This number may have been carried forward from a previous action. • the name of the database job. • the AFPLOOK status. • the user who started AFPLOOK for the database, and when it was started (date and time).
System Coordinator Node	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.

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

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

- Initially, AFPLOOK is at status *released* : a start can only be invoked when this status is current.

- Once at status *started*, AFPLOOK can be stopped (but not directly released).

- Status *stopped* can then be changed to released, at which point all statistics are discarded.

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

Starting an AFPLOOK Session

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

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


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

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

         Restrict to Files _____   _____   _____   _____   _____   _____




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

         Press PF5 to Confirm Start


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

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

AFPLOOK File Summary

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

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

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


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


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

   Mark to Display File Details




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

APFLOOK File Summary

The following fields are provided:

Field	Description
C	This field can be marked to display further details for a file.
Fnr	Adabas file number.
Total	The number of commands for this file, and the percentage of file commands to database commands.
Direct Access	The number of direct access commands for this file, and the percentage of potential optimization for direct access commands.
RC	The number of `Release Command ID` commands for this file, and the percentage of potential optimization for `RC` commands. The Adabas RC command releases one or more Command IDs currently assigned to a user. See the *Adabas Command Reference* 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.
Sequential	The number of sequential commands for this file, and the percentage of potential optimization for sequential commands.
Total (bottom of screen)	The total number of commands for all files.

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

Further details for a file can be obtained by

- marking column C for the file, or

- entering 6.2.1 on any command line to display a previously accessed file.

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

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

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

  CC DE Direct Acc       RCs  Sequential  Sequences        Non-Qualifying
  L3 KK    480777        415    2590506     480362          Updates 34
  L1 --         2                                           Inserts 1620
  L9 KK        15         15                                Deletes 1670
  S1 KK        10         10
                                                            Prefetch 0
                                                            Excluded 2255
                                                            Spare 0
                                                            No CID 0
                                                            Max.CIDs 0
                                                            Bad Rsp. 0
                                                            Max.Rec.Buff.Len
  Total      480804       440    2590506                     Direct Acc 1120
  Total Commands for File                     3071847        Sequential 1120



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

APFLOOK File Details Display

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

AFPLOOK Summary Display

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

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

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

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

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

          Sampled Commands                    Potential Optimization

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


  Excluded Commands        1130492 (25%)
  Totals                   4513825 (100%)                       3360480 (74%)

  ------------------------------------------------------------------------------




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

AFPLOOK Summary Display

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

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

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

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

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

  ------- Parameters and High Water Marks       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.