Maintaining Report Definitions

This chapter discusses the Adabas Review facilities that allow you to maintain Adabas Review report definitions. After you have completed your report, you may start it immediately, or save it to be started at another time. A report must be started so that it can accumulate data. For more information, read *Running Reports*.

It covers the following topics:

- Listing Report Definitions

- Changing the DBID

- Displaying Report Information

- Copying a Report Definition

- Purging a Report Definition

- Editing the Buffer Pool Report

- Editing Adabas Pulse Reports

- Editing the Cluster Services Report

- Using the Edit Report (ER) Function

- Editing Existing Reports

- Saving a Report Definition

Listing Report Definitions

The List Report Definition (LR) function lists all reports. From the list, you can:

- Directly update the DBID and Auto Start report options. All report definitions on the screen can be updated in a single operation.

- Use commands to maintain a report. The commands are entered on the selection line preceding the name of the report.

▶ **To access the List Report Definition function:**

1. Enter the code LR on the command line.

   The Report Definitions screen appears as shown in the following example:

```
 19:08:09                  A D A B A S  -  R E V I E W               2009-06-18
                                 Report Definitions                    HUB=15690

                                                       Sum/        Display
    Sel      Report Name                DBID  Auto  Detail  Hist   Program
   +----------------------------------------------------------------------------+
   ! __     APPLICATION FILE FIELD USAGE        N     S      N     SR-00030 !
   ! __     BUFFER POOL DISPLAY                 N     S      N     BUFFPOOL !
   ! __     COMMAND LOGGING                     N     D      N     SR-00025 !
   ! __     COMMANDS BY HOUR                    Y     S      N     SR-00004 !
   ! __     COST ACCOUNTING EXAMPLE             N     S      N     SR-00028 !
   ! __     DESCRIPTOR USAGE REPORT             N     S      N     SR-00020 !
   ! __     EXCEPTIONAL RESPONSE CODES          Y     S      N     SR-00002 !
   ! __     FILE USAGE                          N     S      N     SR-00031 !
   ! __     HOURLY DATABASE OVERVIEW            N     S      N     SR-00032 !
   ! __     IO COUNT BY HOUR                    N     S      N     SR-00023 !
   ! __     IO SUMMARY BY RABN                  N     S      N     SR-00022 !
   ! __     IO SUMMARY BY VOLUME                N     S      N     SR-00021 !
   +----------------------------------------------------------------------------+


 Command: _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
        Help        Exit  Mod               -     +                       Menu
```

The columns of the Report Definitions screen are explained as follows:

Sel	Selection line. Enter commands on the selection line preceding the report name. For a list of available commands, enter a ? on the selection line.
Report Name	An arrow (>) preceding the report name indicates that the report has been started.
DBID	Database from which the report collects data. If this field is left blank, you are prompted for the DBID when you start the report.
Auto	Indicates whether the report is started automatically at database initialization.
Sum/Detail	"S" indicates a summary report; "D" indicates a detailed report.
Hist	Indicates whether the report writes history data.
Display Program	Lists the name of the program generated to display report output online.

PF7 and PF8 have been provided as scroll keys. If more than one screen of report names exists, PF8 or (+) scrolls the list forward and PF7 or (-) scrolls the list backward.

▶ **To update the values of the DBID and/or Auto Start report options:**

1. Press PF4 (Mod).

   All DBID and Auto fields become modifiable (modify mode).

2. Modify the values as required.

3. Press PF5 (Updat) to save the changes or PF3 (Exit) to abandon your changes.

Only the report definitions listed on the current screen may be modified. Pressing PF8 to move forward or PF7 to move backward cancels the modify mode.

▶ **To issue a command from the Report Definitions screen:**

1. Enter one of the following commands on the selection line preceding the report name.

Command	Issue this command to...
CD	Change DBID
CP	Change display program
CR	Copy report definition
DD	Display report information
EB	Edit buffer pool report
EL	Edit Pulse Report
EX	Edit Cluster Services Report
EP	Edit display program
ER	Edit report
PR	Purge report definition
RG	Regenerate display program
ST	Start report
VW	View started report

Changing the DBID

Each report collects data from a particular database. You can change that database using the Change DBID (CD) command from the List Report Definitions (LR) function. The CD command is issued from the Report Definitions screen.

▶ **To change the database for which the report is to be created:**

1. Enter the CD command on the selection line preceding the report name and press ENTER.

   The cursor is positioned at the DBID column for that report and the field is opened for editing.

2. In the DBID column, enter a valid DBID corresponding to the database to be monitored and press ENTER.

   Or:
   Alternatively, you may leave the DBID column blank. You are then prompted to enter the DBID when you start the report.

Mass Update of Target DBIDs

You can also change the database from which data is collected for multiple reports at the same time by issuing the MODIFY DBIDS command from the List Report Definitions (LR) function.

▶ **To modify the database for multiple reports at the same time:**

1. Enter MODIFY DBIDS on the command line of the Report Definitions screen and press ENTER.

   The Modify DBIDs screen appears listing as many as 24 reports:

```
 19:09:14                  *****  R E V I E W  *****              2009-06-18
                              Modify Reports


   DBID      Report Name              DBID       Report Name
 +-----------------------------------------------------------------------------+
 ! 00000 APPLICATION FILE FIELD USAGE  ! 00000 JOB OVERVIEW                     !
 ! 00000 BUFFER POOL DISPLAY           ! 00000 LAST 500 ADABAS CALLS            !
 ! 00000 COMMAND LOGGING               ! 00000 LONG RUNNING COMMANDS            !
 ! 00000 COMMANDS BY HOUR              ! 00000 NATURAL PROGRAM TRACE            !
 ! 00000 COST ACCOUNTING EXAMPLE       ! 00000 NATURAL SUMMARY                  !
 ! 00000 DESCRIPTOR USAGE REPORT       ! 00000 NATURAL TRANSACTION TRACE        !
 ! 00000 EXCEPTIONAL RESPONSE CODES    ! 00000 PRILOG REPORT                    !
 ! 00000 FILE USAGE                    ! 00000 RATE OF COMMANDS AND IOS BY DA !
 ! 00000 HOURLY DATABASE OVERVIEW      ! 00000 RATE OF COMMANDS AND IOS BY HO !
 ! 00000 IO COUNT BY HOUR              ! 00000 SUMMARY REPORT BY FILE           !
 ! 00000 IO SUMMARY BY RABN            ! 00000 THREAD ACTIVITY                  !
 ! 00000 IO SUMMARY BY VOLUME          ! 00000 THREAD ACTIVITY BY COMMAND     !
 +-----------------------------------------------------------------------------+
               (Press PF2 to set all reports to the same DBID)


 Command: _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
       Help  Same  Exit        Save        -     +                     Menu
```

▶ **To modify the DBID to be monitored for any number of reports:**

1. Overtype the listed DBID for each report.

2. Press PF5 to save your changes; press PF3 to exit without saving your changes.

▶ **To change the DBID for all reports listed on the screen to the same DBID:**

1. Press PF2.

   You are prompted to enter the DBID.

2. Enter the DBID and press ENTER.

Displaying Report Information

From the list of available report definitions, you can display (DD) a brief summary of report information. For all reports, this information includes:

Name	name of the report
Saved By	the identity of the user who saved the report
Format	whether the report provides summary or detailed information
History	whether history data is saved for the report

For each individual report the following information is included, depending on the report's particular settings:

Account	for summary reports, the order in which control breaks occur; for detailed reports, the order in which the fields are displayed
Summary	the fields for which summary values are calculated
Rate	the fields for which the rate per second for the field's value is calculated.
Minimum	the fields for which the minimum value is displayed.
Maximum	the fields for which the maximum value is displayed.
Average	the fields for which average values are calculated
Round	the fields for which the value is rounded (that is, incremented) by the amount specified in the report definition so that the result is evenly divisible by the "round" value.
Select	the fields selected for the report. A maximum of 20 fields is allowed for each report.

▶ **To display report information:**

1. From the Started Reports screen, enter the DD command on the selection line preceding the report name to display a summary of report information.

   The screen similar to the following appears:

```
19:12:57                    *****  R E V I E W  *****                    2009-06-18
                               Report Information


    +----------------------------------------------------------------------+
    ! Name...... APPLICATION FILE FIELD USAGE                              !
    ! Saved By.. INSTALL                                                   !
    ! Format.... Summary                                                   !
    ! History... No                                                        !
    ! Account... NATAPPL,FILE,FBFIELDS                                     !
    ! Summary... IOS,COMMANDS,CMDRESP,ADADURA                              !
    !                                                                      !
    !                                                                      !
    !                                                                      !
    !                                                                      !
    !                                                                      !
    !                                                                      !
    +----------------------------------------------------------------------+


    Command: _____
    Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
         Help       Exit                       -     +                    Menu
```

Copying a Report Definition

One way to create new reports is to use the Copy Report Definition (CR) command from the List Report Definitions (LR) function. The CR command is issued from the Report Definitions screen. The command allows you to copy a report definition either to another Adabas Review repository, or to the current Adabas Review repository under a new name.

▶ **To copy a report definition and generate a display program:**

1. Enter the CR command on the selection line preceding the report name.

   Adabas Review displays the Copy Report Definition window, which contains the Report Name, the DBID, and File number of the report definition to be copied. The Report Name field is initially set to the report name to be copied.

2. If you are copying the report to the current Adabas Review repository, change the report name.

   The DBID and the File fields indicate the repository where the report is to be copied. These fields are initially set to the current repository.

3. Ensure that the DBID and File indicate a valid Adabas Review repository.

4. Once you have made the required changes, press PF5 to copy the report definition, or press PF3 to cancel and exit the window.

   After the report definition is copied, the Display Program Name will display the message

   ```
   Need RG
   ```

This indicates that you must generate a display program before the new report can be displayed.

5. Generate a display program in one of two ways:

    Enter RG on the selection line preceding the new report name; or

    Edit the report using the Edit Report (ER) function; then save it. Adabas Review automatically generates a new display program reflecting the changes.

Purging a Report Definition

The Purge Reports (PR) command is issued from the Report Definitions screen (LR function). This command deletes the report definition and the corresponding display program, if the display program is not also used with a history report.

▶ **To purge a report definition:**

1. Enter the PR command on the selection line preceding the name of the report to be deleted.

    Depending on your profile settings, you may be prompted to confirm the purge request before the command is executed.

2. Confirm the purge request, if required.

Editing the Buffer Pool Report

A sample report called "Buffer Pool Report" is created when Adabas Review is installed. The Edit Buffer Pool Report (EB) function uses the sample report to create, edit, and start buffer pool reports for specific databases being monitored.

Unlike other reports, a display program is *not* generated for buffer pool reports when they are saved. When viewed, these reports call the program BUFFPOOL, which displays a bar graph showing the buffer pool statistics.

▶ **To access the Edit Buffer Pool Report function:**

1. Enter the EB command on the command line.

▶ **To edit the Buffer Pool Report:**

1. From any of the list function screens (LR, LS, and LH), enter either the EB or ER command on the selection line preceding the name of the buffer pool report.

    The Edit Buffer Pool Report window appears as shown in the following example:

```
 19:13:38                 A D A B A S  -  R E V I E W              2009-06-18
  HUB=15690                   Edit Buffer Pool Report                 HUB=15690




          +------------------------------------------------------+
          !                                                      !
          !    Report Name: ...  _____  !
          !                                                      !
          !    DBID: ..........  _____                           !
          !                                                      !
          !    Autostarted: ... N                                !
          !                                                      !
          !                                                      !
          +------------------------------------------------------+




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

You can rename the report (Report Name field), and change the DBID for which the buffer pool information is collected (DBID field). You can also indicate whether the report should be autostarted (Y) or not (N).

2. Press PF5 to save your changes to the report; press PF6 to save the report and manually start it.

Editing Adabas Pulse Reports

Adabas Pulse Reports receive nucleus statistical data from Adabas on an interval basis. Adabas transmits a pulse record to Adabas Review once in each interval period.

Adabas Pulse Reports allows a DBA to collect statistical details about the Adabas nucleus during a user-specified time interval. The reports collect minimum, maximum, and average values for non-cumulative nucleus statistics such as:

- The current number of users

- The current amount of the work pool used

- The current number of hold queue elements

Adabas Pulse Reports also gather and calculate the delta values of cumulative nucleus statistics such as buffer waits, format overwrites, and buffer flushes. These statistics can help a DBA monitor overall database activity over a given period of time. Non-cumulative statistics are checked every minute with the average calculated at the time interval. Cumulative statistics are checked only at the time interval when deltas are calculated.

The Adabas Pulse Report timer interval can be set in the report options and must be specified in minutes. The minimum interval is one minute and the maximum is 1440 minutes (24 hours). Once a report is started, the specified interval remains in effect until the report is stopped. A new interval can be set prior

to restarting the report. Only one Adabas Pulse Report is allowed per database. This feature is available on all supported platforms.

- Defining and Running an Adabas Pulse Report

Defining and Running an Adabas Pulse Report

To define an Adabas Pulse Report, you choose the DBID where the report will run and the interval (in seconds), as well as some additional settings and information. Only one Adabas Pulse Report may be started per database. In the Adabas Review hub environment, you may have several Adabas Pulse Reports active, but only one for each of the monitored databases.

▶ **To access the Edit Pulse Report function:**

1. Enter the EL command on the command line.

   The Edit Adabas Pulse Report screen displays:

```
 11:27:54                    A D A B A S  -  R E V I E W              2009-06-18
                              Edit ADABAS Pulse Report                  HUB=15690



            +-------------------------------------------------------+
            !                                                       !
            !    Report Name: .... ADABAS Pulse Report              !
            !    DBID: ........................... _____            !
            !    ADABAS Collection Interval: (mins) ____            !
            !    Autostarted: ....................... N             !
            !                                                       !
            !    Collect History: .................... N            !
            !    History Interval: (minutes) ...... ____            !
            !    Repository DBID: ............... __123             !
            !    Repository File: ................ __45             !
            !    Repository Database SVC: ........  234             !
            +-------------------------------------------------------+



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

   This screen provides the following input fields:

Field	Explanation
Report Name	The name of the report. This field cannot be modified.
DBID	The database ID of the database on which the report is to run. When a DBID is entered into this field, the DBID will be automatically appended to the report name.
Adabas Collection Interval	The number of seconds between each report. Report data will be written to the Adabas Review history file once for each interval. The minimum interval is one minute and the maximum is 1440 minutes.
Autostarted	Indicates whether the report should be started when Adabas Review is initialized.
Collect History	Indicates whether history data should be collected.
History Interval	The number of minutes between each history data collection.
Repository DBID	The database ID of the database that contains the Adabas Review history file.
Repository File	The file number of the Adabas Review history file.
Repository Database SVC	The SVC currently being used by the Adabas Review history database.

2. Press PF5 to save your changes to the report; press PF6 to save the report and manually start it. You will find the Adabas Pulse Report listed as a started report and, after the first collection interval is reached, you can enter the Pulse Statistics screen, as shown below:

```
 12:18:55                A D A B A S  -  R E V I E W              2009-06-18
                             Pulse Statistics                     HUB=15690


                     Select one Pulse interval and press Enter
 +----------------------------------------------------------------------------+
 ! _ 2009-06-18 11:37:54      _ _____ _____      _ _____ !
 ! _ 2009-06-18 11:41:29      _ _____ _____      _ _____ !
 ! _ 2009-06-18 12:13:44      _ _____ _____      _ _____ !
 ! _ 2009-06-18 12:18:33      _ _____ _____      _ _____ !
 ! _ _____ _____      _ _____ _____      _ _____ !
 ! _ _____ _____      _ _____ _____      _ _____ !
 ! _ _____ _____      _ _____ _____      _ _____ !
 ! _ _____ _____      _ _____ _____      _ _____ !
 ! _ _____ _____      _ _____ _____      _ _____ !
 ! _ _____ _____      _ _____ _____      _ _____ !
 ! _ _____ _____      _ _____ _____      _ _____ !
 ! _ _____ _____      _ _____ _____      _ _____ !
 ! _ _____ _____      _ _____ _____      _ _____ !
 +----------------------------------------------------------------------------+


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

3. Selecting a pulse interval line displays an additional Pulse Statistics screen listing details about the pulse interval, as shown below:

```
12:18:55                   A D A B A S  -  R E V I E W              2009-06-18
                                Pulse Statistics                   HUB=15690


                                        High           Low            Avg
        Allocated Size --------------------------------------------------------
               Format Pool              7600           7600           7600
               Work Pool                   0              0              0
               Table of ISNs               0              0              0
               Table of Seq Cmds           0              0              0

        Allocated Entries -----------------------------------------------------
               Attached Buffers            2              2              2
               Command Queue               1              1              1
               Hold Queue                  0              0              0
               User Queue                  5              5              5

        Buffer Efficiency -----------------------------------------------------
               Percent                   5.0            5.0            5.0

Command: _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
     Help        Exit  Delta                                            Menu
```

4. Pressing PF4 (Delta) displays the Delta Statistics screen, as shown below:

```
12:18:55                   A D A B A S  -  R E V I E W              2009-06-18
                                Pulse Statistics                   HUB=15690



                                Delta Statistics


+--------------------------------------------------------------------------+
!   Buffer Waits                 0      User Commands           22    !
!   Buffer Flushes               2      Asso Reads               0    !
!   Format Overwrites            0      Asso Writes              0    !
!   Format Translations          0      Data Reads              11    !
!   System Commands              2      Data Writes              0    !
!   Total Commands              24      Work Reads               0    !
!   Throwbacks                   0      Work Writes              0    !
!   Thread Switches            110      Total IOS               11    !
+--------------------------------------------------------------------------+



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

Editing the Cluster Services Report

A Cluster Services report displays information about cache and locks in an Adabas Cluster Services environment. Adabas writes the report information directly to the Adabas Review history file. This information is sent to Adabas Review on an interval basis that is chosen when the report definition is created. This feature is only available for the z/OS platforms.

A subtask attached as separate unit of work from the Adabas nucleus address space collects Adabas Cluster Services statistics on a user-specified timer interval. The subtask will calculate the delta of lock and cache statistics over the interval. These delta values will be written directly to the Adabas Review repository file as history data at every interval. The statistics can be viewed and maintained online through the history data menus.

Approximately 2 kilobytes of data will be written to the repository file every interval. For this reason, Software AG recommends that the DBA reexamine and closely monitor the size of this file when the report is running. Minimal data is written for those intervals that have no statistical change. The Cluster Services Report timer interval can be set in the report options and must be specified in minutes. The minimum interval is one minute and the maximum is 1440 minutes (24 hours). Once the report is started, the interval remains in effect until the report is stopped. A new interval can be set prior to restarting the report.

Only one Cluster Services Report may be started per database (cluster). In the Adabas Review hub environment, you may have several Cluster Services Reports active, but only one for each of the monitored databases.

- Defining and Running the Cluster Services Report

Defining and Running the Cluster Services Report

The Cluster Services report can be started and stopped in the same way as any other Adabas Review report (read *Saving a Report Definition* and *Starting Reports*). However, it cannot be viewed online from the LS screen. It can only be viewed online from the LH and LH EX screens (read *Managing History Data*, elsewhere in this guide).

To define a Cluster Services report, you choose the DBID where the report will run, and the interval (in seconds). You must also choose which database and file is to receive the report data, and which SVC to use.

▶ **To access the Edit Cluster Services Report function:**

1. Enter the EX code on the command line.

   The Edit Cluster Services Report screen appears:

```
  15:37:34                A D A B A S  -  R E V I E W              2009-06-18
                             Edit Cluster Services Report             LOCL=00222


                +------------------------------------------------------+
                |                                                      |
                |    Report Name: ..... CLUSTER SERVICES REPORT        |
                |    DBID: ...................... _____                |
                |    Interval: (mins) ...........  ____                |
                |    Autostarted: ..............      N                |
                |                                                      |
                |    Repository DBID: ........... _____                |
                |    Repository File: ...........  ____                |
                |    Repository Database SVC: ...   ___                |
                |                                                      |
                +------------------------------------------------------+



      Command: _____
      Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
```

This screen provides the following input fields:

Field	Explanation
Report Name	The name of the report. This field cannot be modified.
DBID	The database ID of the database on which the report is to run. When a DBID is entered into this field, the DBID will be automatically appended to the report name.
Interval	The number of minutes between each report. Report data will be written to the Adabas Review history file once for each interval. The minimum interval is one minute and the maximum is 1440 minutes.
Autostarted	Indicates whether the report should be started when Adabas Review is initialized.
Repository DBID	The database ID of the database that contains the Adabas Review history file.
Repository File	The file number of the Adabas Review history file.
Repository Database SVC	The SVC currently being used by the Adabas Review history database.

Using the Edit Report (ER) Function

Adabas Review report definitions are created using the Edit Report (ER) function. This function provides a series of fill-in-the-blank and selection screens to help you select the field information, processing rules, and report option parameters that make up a report definition.

The Edit Report screen is used to define field information; that is, the field name and order of selection. If the field type is numeric, you can specify whether the values are to be rounded, totaled, averaged, or expressed as a percentage or rate of commands per second. You can also specify that the minimum or

maximum values are to be displayed.

Field information may either be entered directly on the Edit Report screen or selected from screens containing a list of fields. You can access a list of fields using PF11 , the FLDS command, or the LF command, and then select the appropriate categories. The order of selection is indicated by typing a number in front of the field. The chosen fields are transferred to the Edit Report screen in the order specified.

New reports may be created from existing reports by editing the original report, changing the name of the report, and saving it under the new name. New reports may also be created by using the Copy Report Definition (CR) command from the List Report Definitions (LR) function.

This section covers the following topics:

- Accessing the Edit Report Screen

- Entering the Report Name

- Entering the DBID

- Entering the Field Names

- Specifying Field Order

- Specifying Numeric Options for Summary Reports

- Using the Report Processing Rules Screen

- Using the Report Options Screen

Accessing the Edit Report Screen

▶ **To access the Edit Report (ER) function:**

1. Enter the ER command on the command line.

▶ **To edit a report:**

1. From any of the report list screens (`LR`, `LS`, and `LH` commands), enter the ER command on the selection line preceding the report name.

   Note:
   Entering ER for the Buffer Pool Report displays the Buffer Pool Report window.

   The Edit Report screen is displayed as shown below:

```
 19:20:46                  A D A B A S  -  R E V I E W              2009-06-18
                                   Edit Report                         HUB=15690
       Detail/Summary: S
       Report Name: _____    DBID to Monitor: _____


       +------------------------------------------------------------------+
       ! Field          Order   Sum   Min   Max   Avg   Pct   Rate   Round !
       !------------------------------------------------------------------!
       ! _____        ____    _     _     _     _     _     _    _____ !
       ! _____        ____    _     _     _     _     _     _    _____ !
       ! _____        ____    _     _     _     _     _     _    _____ !
       ! _____        ____    _     _     _     _     _     _    _____ !
       ! _____        ____    _     _     _     _     _     _    _____ !
       ! _____        ____    _     _     _     _     _     _    _____ !
       ! _____        ____    _     _     _     _     _     _    _____ !
       ! _____        ____    _     _     _     _     _     _    _____ !
       ! _____        ____    _     _     _     _     _     _    _____ !
       ! _____        ____    _     _     _     _     _     _    _____ !
       +------------------------ Page 1 ----------------------------+


 Command: _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
       Help  Optns Exit       Save  Start  -     +          Rules Flds  Menu
```

The following function keys are provided on the Edit Report screen:

Function Key	Command	Description
PF2	Optns	Accesses the Report Options screen.
PF5	Save	Saves the current report definition.
PF6	Start	Saves the report defined on the screen and start it.
PF10	Rules	Accesses the Report Processing Rules screen.
PF11	Flds	Accesses the Database Fields Selection screens.

The Edit Report screen provides the following input fields:

Field	Explanation
Report Name	A unique name for the report. A maximum of 32 characters is allowed.
DBID to Monitor	DBID of the database where the data is to be collected.
Field	The fields to be selected by the report. A maximum of 20 fields is allowed for each report.
Order	For summary reports, the order in which control breaks occur; at least one of the fields selected must be marked as an order field. For detailed reports, the order in which the fields are displayed.
Sum	Indicates whether the values for the field are totaled.
Min	Indicates whether the minimum value for the field is displayed.
Max	Indicates whether the maximum value for the field is displayed.
Avg	Indicates whether the average value is calculated for the field.
Pct	Indicates whether the percentage is calculated for the field.
Rate	Indicates whether the rate per second is calculated for the field.
Round	The amount by which the values of the field are rounded.

Entering the Report Name

A report name is required; otherwise, the report cannot be saved to the Adabas Review repository. A report name may be up to 32 characters long and must be unique. Alphanumeric and some special characters may be used in report names.

The following list of special characters may *not* be used in report names:

Character	Description
(')	Apostrophe
(&#65533;)	Cent sign
(:)	Colon
(,)	Comma
($)	Dollar sign
(=)	Equal sign
(%)	Percent sign
(.)	Period
(/)	Slash

Entering the DBID

Use this field to identify the database for which the report is to be created. For collecting data from multiple databases simultaneously (Adabas Review in hub mode or in local mode) the artificial target ID "11111" can be used. This target ID effectively causes the system to collect data for the report from all databases that have a reporting link already established with Adabas Review; however, use of the target ID 11111 does not create such a link.

To create a link between Adabas Review and each database for which you want to simultaneously collect data for a report, you must create a report with the DBID set to "11111". You must then start the report for each database from which you want to collect data. To identify the collected data with a particular database, you need to include the report field DBID at the first level of the report definition.

Entering the Field Names

Up to 20 fields may be selected for a single report. You may enter field names directly on the Edit Report screen or you may select the fields from a list. The fields you choose from a list are transferred automatically to the Edit Report screen.

- Using the Field Category Selection Screen
- Using the Field Selection Screens

Using the Field Category Selection Screen

▶ **To view the field categories:**

1. Access the field selection screens by pressing PF11 or by entering the FLDS or LF command without a category code.

   The Database Field Selection screen, which lists field categories, is displayed:

```
 19:22:49                  A D A B A S  -  R E V I E W              2009-06-18
                           Database Field Selection                   HUB=15690

 Please Mark Categories to Select

   AC - ADABAS Control Block Fields ............. _

   BU - ADABAS Buffer Fields ................... _

   IN - Interval and Time Fields ............... _

   IO - ADABAS I/O Fields ...................... _

   NA - NATURAL Fields ......................... _

   NU - ADABAS Nucleus Fields .................. _

   OP - Operating System Fields ................ _

   TP - Transaction Processing Monitor Fields ... _

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

2. If you need a description of a field category, use the online help system by placing a ? on the line opposite the category name.

   The field categories are also documented in the *Field Reference*.

3. Choose the field category you wish to use by typing an X in the input field opposite the category name.

Using the Field Selection Screens

▶ **To use the field categories:**

1. If you know the field category you wish to use, enter the FLDS command or the LF command followed by the code for the field category on the command line of the Edit Report screen.

   Category codes are as follows:

Code	Field Type Category
AC	Adabas control block
BU	Adabas buffer
IN	Interval and time
IO	Adabas I/O
NA	Natural
NU	Adabas nucleus
OP	Operating system
TP	Transaction processing monitor

   For example, to list the Adabas control block fields, you could enter either of the following:

```
   LF AC
```

   or

```
   FLDS AC
```

   Field lists for the chosen categories are displayed. For example, choosing the Adabas control block (AC) category displays the following screen:

```
 19:25:27                  A D A B A S  -  R E V I E W            2009-06-18
                             ADABAS Control Block Fields            Page 1   of 2

 Sel Fld Name   Description            Sel Fld Name   Description
 ___   ACBUSER   ACB user              ___   COP2      Command option 2
 ___   ADDIT1    Additions 1           ___   DESUPD    Nr of desc updated
 ___   ADDIT2    Additions 2           ___   DURATION  Duration (16 millisecs)
 ___   ADDIT3    Additions 3           ___   ERRFLDNM  Error field name
 ___   ADDIT4    Additions 4           ___   FB        Format buffer
 ___   ADDIT5    Additions 5           ___   FBFIELDS  Fields in format buffer
 ___   CALLTYPE  Call type             ___   FBL       Format buffer length
 ___   CID       Command ID            ___   FILE      File number
 ___   CIDALPHA  CID Alpha             ___   FILENAME  File name
 ___   CMD       ADABAS command        ___   GLOBFMID  Global format ID
 ___   CMDNAME   Command name          ___   IB        ISN buffer
 ___   CMDSTAT   Command status        ___   IBL       ISN buffer length
 ___   CMDTYPE   Command type          ___   ISN       Internal seq number
 ___   CMPRECL   Compressed rec length ___   ISNLL     ISN lower limit
 ___   COMMANDS  Number of Commands    ___   ISNQ      ISN quantity
 ___   COP1      Command option 1      ___   ORGDURA   Unmodified duration

 Command: _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
       Help        Exit            Accpt  -     +                          Menu
```

2. If you need a description of a field on any category screen, use the online help system by placing a ? in the **Sel** column associated with the field name.

   This information is also documented in the *Field Reference*.

3. Choose the fields you wish to use by typing an X in the **Sel** column associated with the field name.

4. Specify field order by typing a number in the **Sel** column associated with the field name.

   For more information, refer to the section *Specifying Field Order*.

5. After completing your selections, press PF6 or enter the accept (ACCPT) command to hold your selections temporarily while you continue working on your report.

   You are returned to the Edit Report screen where your field selections are transferred automatically. If you specified a field order, the numbers you entered are listed in the **Order** column.

Specifying Field Order

The order you specify for fields in your report affects the output differently depending on the type of report:

- For *detailed reports*, which are straight recordings of commands processed, the order indicates the order in which the fields are displayed.

- For *summary reports*, which display summarized data, the order indicates the order in which control breaks occur (in other words, the order in which the data is summarized).

  For example, in a summary report that displays command name and response code data (in that order), the data is grouped first by command name, and within each command name group, the data is grouped by response code.

> **To specify the field order of a report:**

1. Type a unique number in the **Order** column for that field and press Enter.

   Duplicate order numbers are not accepted.

> **To change the field order:**

1. Change the order numbers in the appropriate **Order** columns and press Enter.

   The fields are displayed in the new order.

   If you add or delete a field, the remaining fields are reordered accordingly.

   For summary reports, at least one of the fields selected must be marked with an order number. Order numbers are not required for all fields; fields on which calculations are performed (such as a field marked as a SUM field) are generally not used as control breaks.

Specifying Numeric Options for Summary Reports

Note:
These options are valid only for database summary reports.

- Numeric Fields
- Calculations

Numeric Fields

For the following numeric fields, the order will not affect control break or sort processing:

Option	Explanation
Commands	The number of commands accounted for in the control break.
Strtdate	The date of the first command encountered in the control break.
Strttime	The time of the first command encountered in the control break.
Enddate	The date of the last command encountered in the control break.
Endtime	The time of the last command encountered in the control break.
Seconds	The total number of seconds that the account entry has been active.

Read *Report Options* in *Specifying Reporting Options* for more information about sorting reports by COMMANDS (USAGE), or by STRTDATE or STRTTIME (DATETIME).

Calculations

For numeric fields with which calculations may be performed (such as number of I/Os or command response time), the following mathematical operations may be performed for each control break on numeric field values:

Operation	At each control break, this operation...
Sum	Calculates and displays a total of the field's values.
Min	Displays the minimum value for a field.
Max	Displays the maximum value for a field.
Avg	Calculates and displays the average value for a field.
Pct	Calculates and displays the percentage for a field's values.
Rate	Calculates and displays the rate per second for a field's value.
Round	Rounds the field's values by the amount you specify in this column. A value in this column tells Adabas Review to take the actual field value and increment it by some value so that the result is evenly divisible by the round value.

▶ **To use the calculation operations:**

1. For all operation except Round, mark the appropriate column with an X and press Enter.

   Or:
   For the Round option, type a number in the appropriate column and press Enter.

   For example, to round the Adabas duration up to .05 of a second, type in .05 in the Round column for the DURATION field.

Using the Report Processing Rules Screen

Report processing rules determine how field values are selected for your report. These rules restrict the accumulated data to certain values or conditions. For example, a processing rule can be written to restrict data collection to commands that return a nonzero response code.

▶ **To access the Report Processing Rules screen:**

1. From the Edit Report screen, press PF10; or enter the command RULES on the command line.

   The Report Processing Rules screen appears as shown in the following example:

```
 19:34:44                  A D A B A S  -  R E V I E W              2009-06-18
                              Report Processing Rules                 HUB=15690

                                      REPORT ONE
 +-------------------------------------------------------------------------+
 !  Field     Op      Value                                          And/Or !
 !-------------------------------------------------------------------------!
 ! _____  __  _____   AND  !
 ! _____  __  _____   ___   !
 ! _____  __  _____   ___   !
 ! _____  __  _____   ___   !
 ! _____  __  _____   ___   !
 ! _____  __  _____   ___   !
 ! _____  __  _____   ___   !
 ! _____  __  _____   ___   !
 ! _____  __  _____   ___   !
 ! _____  __  _____   ___   !
 ! _____  __  _____   ___   !
 +---------------------------- Page 1 ----------------------------------
 
 
 
 Command: _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
       Help  Optns Exit        Save  Start   -     +               Flds  Menu
```

Note:
For each report, a total of twenty (20) lines are available for processing rules.

An explanation of the input fields on this screen is provided in the table below:

Field	Explanation
Field	The name of the field for which the restriction applies. **Note:** Reporting fields STARTDATE and STARTTIME cannot be used in processing rules.
Op	The conditional operand that specifies how the restriction applies. The following operands may be used: ● = or EQ: equal to ● < or LT: less than ● > or GT: greater than ● : or NE: not equal to
Value	The field that allows you to restrict the information accumulated by the report to a subset of the values in a particular field. Values may be specified in several formats and may be single values or ranges.
And/Or	Specifies the Boolean operators AND or OR to define the relationship between multiple processing rules.

- Guidelines for Specifying Values
- Example Processing Rules
- Entering Processing Rules

Guidelines for Specifying Values

The following guidelines describe acceptable ways to specify values in a processing rule:

- Depending on the field, a value may be numeric or alphanumeric.

- A value may be specified as a single value, a range of values, or a list of values.

- When specified as a list, values are enclosed in parentheses and separated by commas; when specified as a range, the two values are enclosed in parentheses and separated by a hyphen.

- For alphanumeric fields, an asterisk (*) may be used to indicate wildcard prefixing and suffixing (see examples below).

- Values may be expressed in decimal or hexadecimal format. If using hexadecimal format, the value is preceded by an "X" and enclosed in single quotes.

- The length to be compared in the rule is taken from the field length, not the length of the rule value.

- When using a wildcard rule value, the length to be compared in the rule is taken from the length of the rule value.

- Rules cannot be specified for Adabas Buffer Segments fields such as VBSEG01. Use the actual buffer fields instead of the segment fields.

Example Processing Rules

The following table shows examples of processing rules:

Example	Explanation
RSP>0	Single numeric value; response code greater than zero.
CMDNAME=FIND	Single alphanumeric value; command name equal to FIND.
FNR EQ (10-50)	Numeric range value; file number equals 10 to 50.
TRANSID=(BAT1,BAT2,BAT3)	Alphanumeric list of values; transaction ID equal to BAT1, BAT2, or BAT3.
JOBNAME=*TEST	Use of wildcard prefixing; all job names ending in "TEST".
ACBUSER EQ X'00370014'	Use of hexadecimal format; ACBUSER equal to the hexadecimal value 00370014.

Entering Processing Rules

▶ **To complete the Report Processing Rules screen:**

1. If you know which field or fields you plan to use, enter them directly on the screen in the Field column.

2. To choose fields using the field selection screens, press PF11 or enter the FLDS or LF command on the command line.

   Refer to the section *Using the Field Selection Screens* for more information.

3. Enter the appropriate operand, using the guidelines in the tables above.

4. Enter the appropriate value, using the guidelines and table above.

Using the Report Options Screen

Report options describe additional processing aspects of the report; such as, whether it is a detailed or summary report, whether it will perform physical command logging, and whether the data it collects will be written to the Adabas Review repository and stored as history data.

Adabas Review is delivered with report options defaults:

● You can modify these defaults for all subsequent reports; or

● You can modify the default values for a particular report, either new or existing.

The Report Options screen lists the default settings for each option; changes may be made directly on this screen.

Note:
One of two different Report Options screens may appear in Adabas Review, depending on whether you have selected a summary report or a detail report. The following sample is for a summary report.

```
 19:33:13                 *****  R E V I E W  *****              2009-06-18
                   Options for summary report: COMMANDS BY HOUR      HUB=15690


+-- Summary Rpt Options ------- Summary Logging ------------ History ---------+
!  AutoStart ......... Y     Summary Log ........ N     History ............ N !
!  Break ............. Y     Summary File .. RVSUM_     History Int ... _____ !
!  Wrapping .......... N     Num of Logs ....... _2     History DBID ... __123 !
!  Print ............. Y     Log Size ....... 99999     History FNR .... ___45 !
!  Rstrt/Intrvl Y _____     Log Full Exit _____     History SVC ...... 234 !
!  Max Restarts .. 999999                                                      !
!  Max K .......... ___8                          ---- Summary Exit ----- !
!  ADALimit ...... _____1                          Exit Name ... _____ !
!  Display By ..   SORTED                          Cmd ............... CL !
!  Entries ....... 999999                          Sum ............... Y !
!  Limit ....... 99999999                                                      !
!  Page/Line .. _55 / 133                                                      !
!                                                                             !
!                                                                             !
+-----------------------------------------------------------------------------+



 Command: _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
       Help       Exit            Accpt           Dflts             Menu
```

For detail information about the parameters on the Report Options screen, read *Specifying Reporting Options*.

Modifying Report Defaults

Adabas Review allows you to modify and save the default report options settings.

After the report options have been modified, all new reports will have report options that default to the new settings. This will affect all new reports created by any user.

▶ **To modify the report default settings:**

1. Create a new empty report by entering ER on the Adabas Review command line.

2. Press PF2 or enter the command OPTNS on the command line to display the Report Options screen.

3. Make any desired changes.

4. Press PF9 (Dflts) to save the modifications.

   You are returned to the Edit Report screen.

Editing Options for a Particular Report

▶ **To change the options for a particular report:**

1. Create a new empty report or access and existing report by entering ER on the Adabas Review command line.

2. Press PF2 or enter the command OPTNS on the command line to display the Report Options screen.

3. Enter the changes directly on the Report Options screen.

4. After completing your changes, press PF6 or enter the ACCPT command.

   The ACCPT command stores your selections temporarily while you continue working on your report.

   You are returned to the Edit Report screen.

Editing Existing Reports

Report definitions that have been saved or started may be modified at any time.

▶ **To access a report definition:**

1. If you know the report name, enter the command ER followed by the report name.

   Or:
   If you do not know the report name, access the List Report Definition (LR) function and enter the command ER in the selection column preceding the report name.

Or:

If the report has been started, you may use the List Started Report (LS) function and enter the ER command in the selection column preceding the report name.

Or:

If the report writes history data to the Adabas Review repository, you may use the List History Reports (LH) function and enter the ER command in the selection column preceding the report name.

The ER command invokes the Edit Report screen for the specified report. The following example shows the "Commands by Hour" report:

```
 19:32:40                A D A B A S  -  R E V I E W            2009-06-18
                                Edit Report                        HUB=15690
       Detail/Summary: S
       Report Name: COMMANDS BY HOUR_____     DBID to Monitor: _____


       +-----------------------------------------------------------------+
       !  Field        Order   Sum   Min   Max   Avg   Pct   Rate   Round !
       !-----------------------------------------------------------------!
       ! HOUR_____      _10      _     _     _     _     _     _    _____ !
       ! CMD_____      _20      _     _     _     _     _     _    _____ !
       ! IOS_____      ___      X     _     _     X     _     _    _____ !
       ! COMMANDS       ___      X     _     _     _     _     _    _____ !
       ! CMDRESP_       ___      X     _     _     X     _     _    _____ !
       ! _____       ___      _     _     _     _     _     _    _____ !
       ! _____       ___      _     _     _     _     _     _    _____ !
       ! _____       ___      _     _     _     _     _     _    _____ !
       ! _____       ___      _     _     _     _     _     _    _____ !
       ! _____       ___      _     _     _     _     _     _    _____ !
       +------------------------ Page 1 -----------------------------+



 Command: _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
       Help  Optns Exit        Save  Start  -     +          Rules Flds  Menu
```

This section covers the following topics:

- Changing Field Information

- Changing Processing Rules

- Changing Report Options

Changing Field Information

▶ **To change the field information displayed on the Edit Report screen:**

1. Type over the existing information.

▶ **To change or add fields to the report:**

1. You may also use the field selection screens.

Refer to the section *Using the Field Selection Screens*.

▶ **To make additional changes after finishing changes on the Edit Report screen:**

1. You may access the Report Processing Rules screen or the Report Options screen.

▶ **To finish your changes to the report definition:**

1. Press PF5 or enter the SAVE command on the command line.

Changing Processing Rules

If the report contains processing rules, a message is displayed at the bottom of the Edit Report screen. You may change existing rules or create new rules, if desired.

▶ **To change processing rules or create new rules:**

1. Display the Report Processing Rules screen by pressing PF10 or entering RULES on the command line.

```
19:34:44                A D A B A S  -  R E V I E W            2009-06-18
                            Report Processing Rules                HUB=15690

                               COMMANDS BY HOUR
+------------------------------------------------------------------------------+
! Field      Op      Value                                            And/Or !
!------------------------------------------------------------------------------!
! ADADURA_   GT   3.0_____   AND !
! IOS_____  GT   200_____   ___ !
! _____   __   _____   ___ !
! _____   __   _____   ___ !
! _____   __   _____   ___ !
! _____   __   _____   ___ !
! _____   __   _____   ___ !
! _____   __   _____   ___ !
! _____   __   _____   ___ !
! _____   __   _____   ___ !
! _____   __   _____   ___ !
+------------------------------- Page 1 --------------------------------------


Command: _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Optns Exit       Save  Start  -     +               Flds  Menu
```

2. Change the rules by typing over the existing information; add rules by entering them on the screen.

   For more information, see section *Using the Report Processing Rules Screen*.

3. Edit the Report Options screen by pressing PF2 or entering OPTNS on the command line.

   Or:
   If no other changes to the report definition are required, press PF5 or enter SAVE on the command line.

Or:
Return to the Edit Report screen by pressing PF3 or entering EXIT on the command line.

Your changes are not deleted unless you exit the Edit Report function without first entering the SAVE command.

Changing Report Options

▶ **To change report options:**

1. Access the Report Options screen by pressing PF2 or entering OPTNS on the command line.

```
 19:33:13                  *****  R E V I E W  *****                2009-06-18
                   Options for summary report: COMMANDS BY HOUR       HUB=15690

+-- Summary Rpt Options ------- Summary Logging ------------ History ---------+
!  AutoStart ......... Y     Summary Log ........ N      History ............ N !
!  Break ............. Y     Summary File .. RVSUM_     History Int ... _____ !
!  Wrapping .......... N     Num of Logs ....... _2     History DBID ... __123 !
!  Print ............. Y     Log Size ....... 99999     History FNR .... ___45 !
!  Rstrt/Intrvl Y  _____    Log Full Exit _____     History SVC ...... 234 !
!  Max Restarts .. 999999                                                      !
!  Max K .......... ___8                                ---- Summary Exit ----- !
!  ADALimit ...... _____1                               Exit Name ... _____ !
!  Display By ..   SORTED                               Cmd ............... CL ! 
!  Entries ....... 999999                               Sum ............... Y ! 
!  Limit ....... 99999999                                                      !
!  Page/Line .. _55 / 133                                                      !
!                                                                              !
!                                                                              !
+------------------------------------------------------------------------------+


 Command: _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
       Help      Exit            Accpt            Dflts             Menu
```

2. To change the report options, type over the existing information.

   For an explanation of the report options, refer to the section *Using the Report Options Screen*.

3. After making changes to the Report Options screen, use either of the following procedures:

   To save the changes temporarily while you make changes to other components of the report, press PF6 or enter ACCPT on the command line.

   Or:
   If no other changes to the report definition are required, press PF5 or enter SAVE on the command line.

   You are returned to the Edit Report screen.

Saving a Report Definition

▶ To save a new or modified report definition:

1. Press PF5 or enter the SAVE command on the command line.

   When a report definition is saved, it is written to the Adabas Review repository and a Natural display program is generated.