

# 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*.

**Note:**

You cannot name a report "ALL".

It covers the following topics:

- Listing Report Definitions
  - Changing the DBID
  - Displaying Report Information
  - Copying a Report Definition
  - Purging a Report Definition
  - Maintaining Buffer Pool Reports
  - Maintaining Adabas Pulse Reports
  - Maintaining Cluster Services Reports
  - Maintaining Standard Database and Client Reporting Reports
  - 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.

Or:

You can specify the report name or partial report name in the LR command. For example:

- Specifying LR IO SUMMARY BY RABN\* will display the list of all report definitions, starting at the IO SUMMARY BY RABN report.
- Specifying LR IO\* will display the list of all report definitions, starting with the first report with the name beginning with the word "IO". In this case, if both the IO COUNT BY HOUR and IO SUMMARY BY RABN reports are in the list, the list would start at the IO COUNT BY HOUR report.

**Note:**

You must specify an asterisk at the end of the full or partial report name in the LR command.

The Report Definitions screen appears. In this example, no specific report name or partial report name was requested:

```

11:26:42                A D A B A S  -  R E V I E W                2011-03-01
                        Report Definitions                          LOCL=00559

```

Sel	Report Name	DBID	Type	Auto	Sum Det	Hist	Display Program
! ___	A NEW	559	D	N	S	N	RD-00008 !
! ___	AAAA CLIENT	ALL	C	N	S	N	RD-00009 !
! ___ >	APPLICATION FILE FIELD USAGE		D	N	S	N	SR-00030 !
! ___	BUFFER POOL DISPLAY		D	N	S	N	BUFFPOOL !
! ___	COMMAND LOGGING		D	N	D	N	SR-00025 !
! ___	COMMANDS BY HOUR		D	Y	S	N	SR-00004 !
! ___	COST ACCOUNTING EXAMPLE		D	N	S	N	SR-00028 !
! ___	DESCRIPTOR USAGE REPORT		D	N	S	N	SR-00020 !
! ___	EXCEPTIONAL RESPONSE CODES		D	Y	S	N	SR-00002 !
! ___	FILE USAGE		D	N	S	N	SR-00031 !
! ___	HOURLY DATABASE OVERVIEW		D	N	S	N	SR-00032 !
! ___	IO COUNT BY HOUR		D	N	S	N	SR-00023 !

```

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:


<b>Sel</b>	Selection line. Enter commands on the selection line preceding the report name. For a list of available commands, enter a ? on the selection line.
<b>Report Name</b>	An arrow (>) preceding the report name indicates that the report has been started.
<b>DBID</b>	The database ID of the database from which the report data is collected. Possible values are a valid database ID, the term "ALL", or a blank. For more information, read <i>Specifying the Report DBID</i> .
<b>Type</b>	Indicates whether the report is a regular Adabas Review report ("D") or an Adabas Review client report ("C").
<b>Auto</b>	Indicates whether the report is started automatically at database initialization.
<b>Sum/Detail</b>	"S" indicates a summary report; "D" indicates a detailed report.
<b>Hist</b>	Indicates whether the report writes history data.
<b>Display Program</b>	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 (Update) 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 one of the following values:

Value	Description
a valid database ID (DBID)	The report runs for the newly-specified database.
ALL	A DBID=ALL report is triggered. In hub mode, a DBID=ALL report collects data from all databases running on the same SVC as the hub (the databases must have been started with the ADARUN REVIEW parameter set to a hub ID). You can specify DBID=ALL for user-defined reports and for most of the predefined Adabas Review reports except for the Buffer Pool reports, the Pulse reports, and the Cluster Services reports. In local mode, a DBID=ALL report collects data only from the local database. For more information, read <i>Specifying the Report DBID</i> .
blank	If you leave the DBID blank, you will be 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. Overtyping 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:

<b>Name</b>	name of the report.  <b>Note:</b> You cannot name a report "ALL".
<b>Saved By</b>	the identity of the user who saved the report
<b>Format</b>	whether the report provides summary or detailed information
<b>History</b>	whether history data is saved for the report

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

<b>Account</b>	for summary reports, the order in which control breaks occur; for detailed reports, the order in which the fields are displayed
<b>Summary</b>	the fields for which summary values are calculated
<b>Rate</b>	the fields for which the rate per second for the field's value is calculated.
<b>Minimum</b>	the fields for which the minimum value is displayed.
<b>Maximum</b>	the fields for which the maximum value is displayed.
<b>Average</b>	the fields for which average values are calculated
<b>Round</b>	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.
<b>Select</b>	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.

**Note:**

You cannot name a report "ALL".

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.

## Maintaining Buffer Pool Reports

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.

This section covers the following topics:

- Accessing the Edit Buffer Pool Report Screen
- Creating a New Buffer Pool Report
- Editing a Buffer Pool Report



## Accessing the Edit Buffer Pool Report Screen

▶ To access the Edit Buffer Pool Report screen:

1. Enter the EB command on the command line.

Or:

Enter the ES command on the command line to access the Specialty Report Types menu.

```
09:11:56                A D A B A S  -  R E V I E W                2011-03-17
                        Specialty Report Types                    LOCL=00559

                                Code                Description
                                -----
                                CM                Review Client Management
                                EB                Edit Buffer Pool Report
                                EC                Edit Client Report
                                EL                Edit Pulse Report
                                EX                Edit Cluster Services Report
                                -----

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

Then enter the EB command on the command line.

The Edit Buffer Pool Report screen appears.

```

09:13:05                A D A B A S  -  R E V I E W                2011-03-17
LOCL=00559                Edit Buffer Pool Report                LOCL=00559

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

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

## Creating a New Buffer Pool Report

 **To edit the Buffer Pool Report:**

1. Access the Edit Buffer Pool screen, as described in *Accessing the Edit Buffer Pool Screen*.

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                2011-03-17
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
    
```

2. Supply a name for the report in the **Report Name** field.

**Note:**

You cannot name a report "ALL".

3. Optionally, supply the database ID for which buffer pool information is collect in the report using the **DBID** field.
4. Indicate whether the report should be autostarted or not in the **Autostarted** field. Specify "N" if you do not want it autostarted; specify "Y" if you do.
5. Press PF5 to save your changes to the report; press PF6 to save the report and manually start it.

## Editing a Buffer Pool Report

### To edit a Buffer Pool Report:

1. Locate the report on any of the list function screens (LR, LS, and LH) and enter the ER command in the **Sel** column associated with the report.

Or:

Enter the ER *rptname* or the EB *rptname* command on the command line of any screen.

The Edit Buffer Pool Report window appears for the report you selected.

2. Optionally change the name for the report in the **Report Name** field.

**Note:**

You cannot name a report "ALL".

3. Optionally, change the database ID for which buffer pool information is collect in the report using the **DBID** field.
4. Optionally, change the autostart selection specified by the **Autostarted** field. Specify "N" if you do not want it autostarted; specify "Y" if you do.
5. Press PF5 to save your changes to the report; press PF6 to save the report and manually start it.

## Maintaining 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.

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.

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.

- Accessing the Edit Adabas Pulse Report Screen
- Creating an Adabas Pulse Report
- Editing an Adabas Pulse Report
- Running an Adabas Pulse Report

## Accessing the Edit Adabas Pulse Report Screen

 **To access the Edit Adabas Pulse Report screen:**

1. Enter the EL command on the command line.

Or:

Enter the ES command on the command line to access the Specialty Report Types menu.

```

09:11:56                A D A B A S  -  R E V I E W                2011-03-17
                        Specialty Report Types                    LOCL=00559

                                Code                Description
                                -----
                                CM                Review Client Management
                                EB                Edit Buffer Pool Report
                                EC                Edit Client Report
                                EL                Edit Pulse Report
                                EX                Edit Cluster Services Report
                                -----

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

Then enter the EL command on the command line.

The Edit Adabas Pulse Report screen appears.

```

10:30:34                A D A B A S  -  R E V I E W                2011-03-17
                        Edit Adabas Pulse Report                LOCL=00559

                                +-----+
                                !
                                ! 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
    
```

## Creating an Adabas Pulse Report

### ▶ To create an Adabas Pulse Report:

1. Access the Edit Adabas Pulse Report screen, as described in *Accessing the Edit Adabas Pulse Report Screen*.

The Edit Adabas Pulse Report screen displays.

```

10:30:34                A D A B A S  -  R E V I E W                2011-03-17
                        Edit Adabas Pulse Report                LOCL=00559

+-----+
!
! 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

```

2. Supply values for the following input fields on the Edit Adabas Pulse Report screen:

#### Note:

You cannot manually specify the name of the Adabas Pulse Report shown in the Report Name field. The Adabas Pulse Report name is generated automatically by Adabas Review when you save the report. It is constructed by combining the words "Adabas Pulse Report" and the database ID of the report. Only one Adabas Pulse Report can be defined for a database.

Field	Specify:
DBID	The database ID of the database on which the report is to run. When a DBID is entered into this field and the report is saved, the DBID is automatically added to the report name.
Adabas Collection 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	Whether the report should be started when Adabas Review is initialized. Specify "N" if you do not want it autostarted; specify "Y" if you do.
Collect History	Whether history data should be collected. Specify "N" if you do not want history data collected; specify "Y" if you do.
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.

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

## Editing an Adabas Pulse Report

### To edit an Adabas Pulse Report:

1. Locate the report on any of the list function screens (LR, LS, and LH) and enter the ER command in the Sel column associated with the report.

Or:

Enter the ER *rptname* or the EL *rptname* command on the command line of any screen.

The Edit Adabas Pulse Report window appears for the report you selected.

2. Optionally modify the values for the following input fields on the Edit Adabas Pulse Report screen:

#### **Note:**

You cannot manually alter the name of the Adabas Pulse Report shown in the Report Name field. The Adabas Pulse Report name is generated automatically by Adabas Review when you save the report. It is constructed by combining the words "Adabas Pulse Report" and the database ID of the report. So if you change the database ID for a field, the report name will change. Only one Adabas Pulse Report can be defined for a database.

Field	Specify:
DBID	The database ID of the database on which the report is to run. When a new DBID is entered into this field and the report is saved, the new DBID automatically replaces the DBID originally included in the report name.
Adabas Collection 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	Whether the report should be started when Adabas Review is initialized. Specify "N" if you do not want it autostarted; specify "Y" if you do.
Collect History	Whether history data should be collected. Specify "N" if you do not want history data collected; specify "Y" if you do.
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.

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

## Running an Adabas Pulse Report

To define the Adabas Pulse Report, you choose the DBID where the report will run and the interval (in minutes), 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 run an Adabas Pulse Report:

1. Access the Edit Adabas Pulse Report screen, as described in *Accessing the Edit Adabas Pulse Report Screen*, and press PF6.

Or:

Start the report as described in *Running Reports Online*.

The Adabas Pulse Report is 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                2011-03-17
                        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
    
```

2. 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                2011-03-17
                        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
    
```

3. 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

```

## Maintaining Cluster Services Reports

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.

- Accessing the Edit Cluster Services Report Screen
- Creating a Cluster Services Report

- Editing a Cluster Services Report

## Accessing the Edit Cluster Services Report Screen

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

1. Enter the EX command on the command line.

Or:

Enter the ES command on the command line to access the Specialty Report Types menu.

```

09:11:56                A D A B A S  -  R E V I E W                2011-03-17
                        Specialty Report Types                    LOCL=00559

                                Code                Description
                                -----
                                CM                Review Client Management
                                EB                Edit Buffer Pool Report
                                EC                Edit Client Report
                                EL                Edit Pulse Report
                                EX                Edit Cluster Services Report
                                -----

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

Then enter the EX command on the command line.

The Edit Cluster Services Report screen appears.

```

11:24:55                A D A B A S  -  R E V I E W                2011-03-17
                        Edit Cluster Services Report                HUB=00041

+-----+
!
!  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---
      Help           Exit           Save  Start                               Menu
    
```

## Creating a Cluster Services Report

 **To create a Cluster Services Report:**

1. Access the Edit Cluster Services Report screen, as described in *Accessing the Edit Cluster Services Report Screen*.

The Edit Cluster Services Report screen displays.

```

11:24:55                A D A B A S  -  R E V I E W                2011-03-17
                        Edit Cluster Services Report                HUB=00041

+-----+
!
!  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---
      Help           Exit           Save  Start                               Menu
    
```

- Supply values for the following input fields on the Edit Cluster Services Report screen:

**Note:**

You cannot manually specify the name of the Cluster Services Report shown in the Report Name field. The Cluster Services Report name is generated automatically by Adabas Review when you save the report. It is constructed by combining the words "Cluster Services Report" and the database ID of the report. Only one Cluster Services Report can be defined for a database.

Field	Specify
DBID	The database ID of the database on which the report is to run. When a DBID is entered into this field and the report is saved, the DBID is automatically added 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	Whether the report should be started when Adabas Review is initialized. Specify "N" if you do not want it autostarted; specify "Y" if you do.
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.

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

## Editing a Cluster Services Report

### To edit a Cluster Services Report:

- Locate the report on any of the list function screens (LR, LS, and LH) and enter the ER command in the **Sel** column associated with the report.

Or:

Enter the ER *rptname* or the EX *rptname* command on the command line of any screen.

The Edit Cluster Services Report window appears for the report you selected.

- Optionally modify the values for report on the Edit Cluster Services Report screen:

**Note:**

You cannot manually alter the name of the Cluster Services Report shown in the Report Name field. The Cluster Services Report name is generated automatically by Adabas Review when you save the report. It is constructed by combining the words "Cluster Services Report" and the database ID of the report. So if you change the database ID for a field, the report name will change. Only one Cluster Services Report can be defined for a database.

Field	Specify
DBID	The database ID of the database on which the report is to run. When a DBID is entered into this field and the report is saved, the DBID is automatically added 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	Whether the report should be started when Adabas Review is initialized. Specify "N" if you do not want it autostarted; specify "Y" if you do.
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.

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

## Maintaining Standard Database and Client Reporting Reports

Adabas Review standard database reports and client reporting reports are maintained in very similar fashions, although separate SYSREVDB screens are provided to do so:

- The standard database report definitions are created using the Edit Report (ER) screen.
- The client reporting report definitions are created using the Edit Client Report (EC) screen.

These screens provide a series of fill-in-the-blank fields and allow you to access other selection screens to help you select the field information, processing rules, and report option parameters that make up the report definition.

The Edit Report and Edit Client Report screens are 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 screens or selected from additional screens containing lists of fields. You can access a list of field categories using the PF11 key, the FLDS command, or the LF command. After selecting appropriate field categories, a series of additional screens appear from which you can select fields for the report. As you select fields, you can specify the order they appear in the report by typing a number in front of the field. The selected fields are then transferred to the Edit Report or Edit Client Report screen (as appropriate) in the order specified.

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

This section covers the following topics:

- Accessing the Edit Report Screen for Standard Database Reports
- Accessing the Edit Client Report Screen for Client Reporting Reports
- Edit Report and Edit Client Report Screen Function Keys and Commands
- Edit Report and Edit Client Report Screen Input Fields
- Specifying the Report Name
- Specifying the Report DBID
- Specifying Field Names
- Commenting Out Fields in a Report
- 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 for Standard Database Reports

 **To access the Edit Report (ER) screen:**

1. Enter the ER command on the command line.

The Edit Report screen appears.

```

13:10:20                A D A B A S  -  R E V I E W                2011-03-17
                                Edit Report                        HUB=00041

Detail/Summary: S
Report Name: _____ DBID to Monitor: _____

+-----+-----+-----+-----+-----+-----+-----+-----+-----+
!  Field      Order   Sum    Min    Max    Avg    Pct    Rate   Round  !
!-----!-----!-----!-----!-----!-----!-----!-----!-----!
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
+-----+-----+-----+-----+-----+-----+-----+-----+

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

For more information about the function keys, commands, and input fields available on this screen, read *Edit Report and Edit Client Report Screen Function Keys and Commands* and *Edit Report and Edit Client Report Screen Input Fields*.

### Accessing the Edit Client Report Screen for Client Reporting Reports

 **To access the Edit Client Report (EC) screen:**

1. Enter the EC command on the command line.

The Edit Client Report screen appears.



```

13:14:14                A D A B A S  -  R E V I E W                2011-03-17
                        Edit Client Report                        HUB=00041

Detail/Summary: S
Report Name: _____ DBID to Monitor: ALL__

+-----+-----+-----+-----+-----+-----+-----+-----+-----+
!  Field      Order   Sum    Min    Max    Avg    Pct    Rate    Round  !
!-----!-----!-----!-----!-----!-----!-----!-----!-----!
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
!  _____  _____  -      -      -      -      -      -      _____  !
+-----+-----+-----+-----+-----+-----+-----+-----+

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

For more information about the function keys, commands, and input fields available on this screen, read *Edit Report and Edit Client Report Screen Function Keys and Commands* and *Edit Report and Edit Client Report Screen Input Fields*.

**Note:**  
For client reports, the DBID default setting is "ALL".

### Edit Report and Edit Client Report Screen Function Keys and Commands

The following function keys are provided on the Edit Report and Edit Client Report screens:

Function Key	Command	Description
PF1	Help	Access help for the screen.
PF2	Optns	Accesses the Report Options screen.
PF3	Exit	Exits the screen, returning to the most recently-accessed menu.
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.
PF12	Menu	Access the Main Menu.

## Edit Report and Edit Client Report Screen Input Fields

The Edit Report and Edit Client Report screens provide the following input fields:

Field	Specify:	For more information, read:
Report Name	A unique name for the report. A maximum of 32 characters is allowed.  <b>Note:</b> You cannot name a report "ALL".	<i>Specifying the Report Name</i>
DBID to Monitor	The DBID of the database where the data is to be collected. Valid values are a valid database ID, the term "ALL", the value "11111", or a blank.	<i>Specifying the Report DBID</i>
Field	The fields to be selected by the report. A maximum of 20 fields is allowed for each report.  You can also comment out fields in a report.	<i>Specifying Field Names</i>  <i>Commenting Out Fields in a Report</i>
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.	<i>Specifying the Field Order</i>
Sum	Indicates whether the values for the field are totaled.	<i>Specifying Numeric Options for Summary Reports</i>  <i>Calculations</i>
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.	

For each report, you can also specify report processing rules (read *Using the Report Processing Rules Screen*) and report options (read *Using the Report Options Screen*).

## Specifying the Report Name

A report name is required for both standard database reports and client reporting reports; 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

## Specifying the Report DBID

Use this field to identify the database for which the standard database report or the client reporting report is to be created. Valid values are described in the following table:

Value	Description
a valid database ID (DBID)	The report runs for the newly-specified database.

Value	Description
11111	<p data-bbox="394 216 1166 422">This artificial target ID allows you to collect data from multiple databases simultaneously (Adabas Review in hub mode). 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.</p> <p data-bbox="394 457 1166 695">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 another report for each database from which you want to collect data; to ensure record and buffer filtering are consistent, these new reports must have the same processing rule definition and the same buffer fields specified as the original report.</p> <p data-bbox="394 730 1166 831">To identify the collected data with a particular database, you need to include the report field DBID or NUCID at the first level of the report definition.</p> <p data-bbox="394 867 1166 961">This definition can also be used in local mode, but will then only collect data from the local database if there is a second database-specific report available.</p>

Value	Description
ALL	<p>A DBID=ALL report is triggered.</p> <ul style="list-style-type: none"> <li>● In hub mode, a DBID=ALL report collects data from all databases running on the same SVC as the hub (the databases must have been started with the ADARUN REVIEW parameter set to a hub ID). For such reports, the reporting link is automatically established with Adabas Review. You can specify DBID=ALL for user-defined reports and for most of the predefined Adabas Review reports except for the Buffer Pool reports, the Pulse reports, and the Cluster Services reports.</li> <li>● In local mode, a DBID=ALL report collects data only from the local database.</li> </ul> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>1. Depending on your environment, a DBID=ALL report may initiate communications with many databases, all of which will then send data for the report. If too many databases send too much data at the same time, hub performance problems may result. In such cases, you might consider excluding specific databases from the DBID=ALL report. To do so, define a report processing rule that does not include (INCLUDE statement or EQ) some databases.</li> <li>2. Once DBID=ALL reports are started, we do not recommend that you use the REVIEW=<i>hubid</i> operator command to alter the hub ID of an active database. If you do, unpredictable results will occur in the processing of the DBID=ALL reports that have been started.</li> <li>3. For client reports, DBID=ALL is the default.</li> </ol>
blank	If you leave the DBID blank, you will be prompted to enter the DBID when you start the report.

## Specifying Field Names

Up to 20 fields may be selected for a single database or client reporting report. You may enter field names directly on the appropriate screen or you may select the fields from lists provided on other screens. The fields you choose from a list are transferred automatically to the Edit Report or Edit Client Report screen (as appropriate).

You may also comment out fields listed in a report. This is especially useful if you are creating and testing a new report.

### To select fields for the report from lists of fields:

1. On the Edit Report or Edit Client Report screen, access the field selection screens by pressing PF11 or by entering the FLDS or LF command without a category code on the command line.

**Note:**

If you know the field category code, you can enter the LF or FLDS command followed by the category name to immediately see the fields in that category. For example, entering "LF NU" will immediately show you a screen displaying the fields in the Adabas Nucleus field category. If you elect to do this, skip this step and Step 2 and proceed with Step 3.

The Report Field Selection screen appears, listing the field categories appropriate for the type of report. Different field categories are available for standard database reports than are available for client reporting reports.

For standard database reports, the following Report Field Selection screen appears:

```

16:46:47                A D A B A S  -  R E V I E W                2011-03-07
                        Report Field Selection                    LOCL=00559

                        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
    
```

For client reporting reports, the following Report Field Selection screen appears:

```

22:46:38                A D A B A S  -  R E V I E W                2011-03-16
                        Report Field Selection                      LOCL=00559

                        Please Mark Categories to Select

AC ADABAS Control Block Fields ..... -
IN Interval and Time Fields ..... -
NA NATURAL Fields ..... -
NU ADABAS Nucleus Fields ..... -
OP Operating System Fields ..... -
TP Transaction Processing Monitor Fields ... -
CR Client Reporting Fields ..... -

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

```

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*.

- Choose the field category or categories containing the fields you want to use by typing an X in the input field associated with the category name. More than one category can be selected at a time

Field lists for the selected categories are displayed. Note that not all fields are available for client reporting reports and the client reporting-specific fields are not available for database reports. For example, the following screen shows the fields in the Adabas Control Block field category that are available for standard database reports:

```

23:01:56                A D A B A S  -  R E V I E W                2011-03-16
                        ADABAS Control Block Fields                LOCL=00559

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

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

Compare this screen with the following screen showing the fields in the Adabas Control Block field category that are available for client reporting reports.

```

23:03:09                A D A B A S  -  R E V I E W                2011-03-16
                        ADABAS Control Block Fields                LOCL=00559

Sel Name      Description                               Sel Name      Description
___ CALLTYPE  Call type                                ___ UCMPRECL   Uncompressed rec length
___ CID       Command ID                               ___ USERID    Internal userid
___ CMD       ADABAS command
___ CMPRECL   Compressed rec length
___ COMMANDS  Number of Commands
___ DURATION   Duration (16 msecs)
___ ERRFLDNM  Error field name
___ FILE      File number
___ FNR       File number
___ ISN       Internal seq number
___ ISNLL     ISN lower limit
___ ISNQ      ISN quantity
___ ORGDURA  Unmodified duration
___ RSPSUB    Response subcode
___ SEQ       Command sequence nr
___ SEQUENCE  Command sequence nr

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

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 on any field selection screen by typing an X in the **Sel** column associated with the field name.

You can also specify the 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*.

4. After completing your selections for the fields in that category, press PF6 or enter the accept (ACCPT) command to hold your selections temporarily while you continue working on your report.

If you selected more than one field category in Step 2, the screen of fields for the next field category you selected appears. Use this screen to select fields from the new field category.

When you have had an opportunity to select fields from all of the categories you selected in Step 2, you are returned to the Edit Report or Edit Client Report screen (as appropriate) with all of your field selections transferred automatically. If you specified a field order, the numbers you entered are listed in the **Order** column on the Edit Report or Edit Client Report screen.

## Commenting Out Fields in a Report

You can comment out fields in a report. This is especially useful while you are creating and testing a new report.

When a field is commented out, data for the field is not collected for the report. However, the field can still be seen in the report definition.

### To comment out a field in a report:

1. Type an asterisk (\*) as the first character of the field name. If you type the asterisk anywhere else in the field name, errors will result.

The field is commented out of the report. The next time the report is started, data will *not* be collected for the field. You must stop and restart the report to see the change.

### To uncomment a field in a report:

- Remove the asterisk at the start of the field name.

The comment for the field is removed. The next time the report is started, data will be collected for the field. You must stop and restart the report to see the change.

## 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). 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.

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.

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

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

- 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:**

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

The fields are displayed in the new order.

## Specifying Numeric Options for Summary Reports

### Note:

These options are valid only for standard database or client reporting 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...
<b>Sum</b>	Calculates and displays a total of the field's values.
<b>Min</b>	Displays the minimum value for a field.
<b>Max</b>	Displays the maximum value for a field.
<b>Avg</b>	Calculates and displays the average value for a field.
<b>Pct</b>	Calculates and displays the percentage for a field's values.
<b>Rate</b>	Calculates and displays the rate per second for a field's value.
<b>Round</b>	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 standard database and for your client reporting reports. 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.  <b>Note:</b> 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:  <ul style="list-style-type: none"> <li>● = or EQ: equal to</li> <li>● &lt; or LT: less than</li> <li>● &gt; or GT: greater than</li> <li>● : or NE: not equal to</li> </ul>
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.
- When a hyphen (-) is used as part of a value, the whole value must be enclosed in apostrophes (').
- 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=FINN	Single alphanumeric value; command name equal to FINN.
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.
NATPROG='N-REVADA'	Alphanumeric value with hyphen included

## 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 *Specifying Field Names* 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 standard database and client reporting reports. These include such things as whether the report 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
! ADALimit ..... ____1
! Display By .. SORTED
! Entries ..... 999999
! Limit ..... 99999999
! Page/Line .. _55 / 133
!
!
+-----+

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

**Note:**  
You cannot name a report "ALL".

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

1. You may also use the field selection screens.  
Refer to the section *Specifying Field Names* for more information.

**▶ 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 -      +                Fllds  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       Acpt       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.

**Note:**

You cannot name a report "ALL".

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