

Specifying Reporting Options

This chapter describes the Adabas Review reporting options you can specify. Adabas Review reporting options are specified on the Report Options screen. Different options are available, depending on whether the report selected is a detailed or a summary report.

For detailed reports, data is collected continuously while the database is active. Such reports are straight recordings of commands processed. Detailed reports cannot be viewed online. However, a display program is generated that may be used to view history data online if the report collects history data. Results of detailed reports are printed at database termination. For detailed reports, the following options are available:

```

22:52:49                ***** R E V I E W *****                2009-04-25
                          Options for detailed report: name                HUB=15690

+--- Detail Rpt Options ----- Detailed Logging ----- History -----+
! AutoStart ..... N      Log ..... Y      History ..... N !
! Print ..... N      File ..... RVLOG_    History Int ... ____ !
! Limit ..... 99999999  Num of Logs ..... _2  History DBID ... __123 !
! Page/Line .. _55 / 133  Log Size ..... __60  History FNR .... __45 !
!                               User Exit ... ____    History SVC ..... 234 !
!                               !                               !
!                               !                               !
!                               !                               !
!                               !                               !
!                               !                               !
!                               !                               !
!                               !                               !
!                               !                               !
!                               !                               !
+-----+-----+-----+

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

Summary reports present a summary of information for a particular field (e.g., command, user ID, program, etc.). Results may be viewed online or printed at database termination. For summary reports, the following options are available:

```

22:57:04          ***** R E V I E W *****          2009-04-25
                   Options for summary report: LONG RUNNING COMMANDS          HUB=15690

+-- Summary Rpt Options ----- Summary Logging ----- History -----+
! AutoStart ..... N      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
    
```

Several categories of reporting options can be specified, although the options differ for detailed and summary reports. For more information, select the option category below.

Report Option Category	Describes the...
<i>General Report Options</i>	Characteristics of the report
<i>Logging Options</i>	Type of information logged and how it is collected
<i>History Options</i>	Location of history information and the frequency with which it is collected
<i>Report Exit Options</i>	Report user exits

General Report Options

The following table describes (in alphabetic order) the general report options that can appear on the Report Options screen. The "Valid for Report Type" column in the table indicates whether the option is valid for detailed reports or summary reports (or both).

Report Option	Description	Possible Values	Default	Valid for Report Type?
ADALimit	Specify a minimum command count for printing on a summary report. If ADALIMIT=100, only entries with a command count of 100 or higher are printed on the report. The default value (1) means that all entries are printed.	count	1	Summary only

Report Option	Description	Possible Values	Default	Valid for Report Type?
Autostart	Specify whether or not a saved report is started by issuing a START command (N) or automatically when Adabas Review is activated (Y).	Y N	N	Detailed and Summary
Break	Specify whether or not subtotals are printed at control breaks (Y) or are suppressed (N) on the summary report.	Y N	Y	Summary only
Display By	Specify the order in which the data is to be displayed on a summary report. Possible display types are: <ul style="list-style-type: none"> ● SORTED: sort in ascending order by control break; ● USAGE: sort in descending order by command count; ● SUMFIELD: sort in descending order by the first field marked as a summary field; ● SORTEDDE: sort in descending order by control break; or ● DATETIME: sort in ascending order by the start date and time of the control break interval. 	SORTED USAGE SUMFIELD SORTEDDE DATETIME	SORTED	Summary only
Entries	Specify the maximum number of entries (that is, unique control breaks) that the summary report can maintain. This option is used to restrict the amount of data collected.	1 - 999999	999999	Summary only
Intrvl	This option appears on the same screen line as the Rstrt report option. The Rstrt option appears first on the line. Specify the time interval (in minutes) for refreshing the summary report. At each interval, the summary report prints its output if PRINT=Y and stores any history data. The report is then deleted.	1 - 999999	---	Summary only
Limit	Specify the maximum number of entries that the detailed or summary report can print. The default value allows all entries to be printed.	1 - 99999999	99999999	Detailed and Summary

Report Option	Description	Possible Values	Default	Valid for Report Type?
Line	<p>This option appears on the same screen line as the Page report option. The Page option appears first on the line.</p> <p>Specify the line length, in characters, of the detailed or summary report. The default line length value is 133 characters. The appropriate value depends on the paper size and the point size and style of the typeface.</p>	72 - 160	133	Detailed and Summary
Max K	Specify the maximum amount of storage available for a summary report.	amount in 8K increments	8	Summary only
Max Restarts	Specify the maximum number of times a summary report will be restarted due to Max K	1 - 999999	999999	Summary only
Page	<p>This option appears on the same screen line as the Line report option. The Page option appears first on the line.</p> <p>Specify the number of lines allowed for the detailed or summary report . The default page length value (55 lines) provides a top and bottom margin for standard printer spacing on a total page size of 66 lines.</p>	10 - <i>nnn</i>	55	Detailed and Summary
Print	<p>For a detailed report, specify whether or not the report is printed at database termination.</p> <p>For a summary report, specify whether or not the report is printed at database termination or when its refresh/history interval is reached.</p>	Y N	Y	Detailed and Summary
Rstrt	<p>This option appears on the same screen line as the Intrvl report option. The Rstrt option appears first on the line.</p> <p>Specify whether the summary report is restarted after the specified refresh/history interval. If Y and an interval are specified for the Intrvl option, the summary report is refreshed automatically when the interval is reached.</p>	Y N	Y	Summary only

Report Option	Description	Possible Values	Default	Valid for Report Type?
Wrapping	Specify whether or not the data collected for a summary report that has SEQUENCE as the first ORDER (control break) field can reuse data elements (i.e., wrap) once the total number of ENTRIES specified have been filled.	Y N	N	Summary only

Logging Options

Two kinds of logging options are available in Adabas Review, depending on the kind of report you have selected. Some logging options are shared by both types; other logging options are specific to the report type.

- **Command logging:** When running detailed reports, you can elect to create a log file of detailed command data, specific to Adabas Review, that can be processed at some later time in an Adabas Review batch run. The output of the detailed log file depends on the report definition and includes only parts of the overall Adabas commands being processed.
- **Summary logging:** When running summary reports, a summary log file can be created, containing summary data, but it cannot be processed later in an Adabas Review batch run because the summary data already has a specific layout. This layout is described in *Summary Record Layout*.

This section covers the following topics:

- Logging Option Descriptions
- Buffers to Log Options (Detailed Reports Only)
- Required Options for Logging
- Recommended Options for Logging
- Logging Guidelines

Logging Option Descriptions

For command logging, the logging options determine whether command logging is performed, what information is logged, and where the command log is written. For summary report logging, the logging options determine whether summary logging is performed, what information is logged, and where the summary log is written.

The following table describes (in alphabetic order) the logging options that can appear on the Report Options screen. The "Valid for Report Type" column in the table indicates whether the option is valid for detailed reports (command logging) or summary reports (summary logging).

Logging Option	Description	Possible Values	Default	Valid for Report Type?
Buffers to Log	See <i>Buffers to Log Options</i> .	---	---	Detailed only
File	Specify the DD/file name prefix used to identify the file to which Adabas Review will write the command log data. Each detailed report that specifies command logging must have its own file name prefix.	5-byte name	RVLOG	Detailed only
Log	Specify whether Adabas Review will write command logs for a particular detailed report (Y), or whether command logging will be ignored (N).	Y N	N	Detailed only
Log Full Exit	<p>Specify the name of the user exit that is called when a summary log is filled during summary report processing.</p> <p>Adabas Review writes to the summary log files in sequential order. When a summary log file is filled, the following actions occur: the file is closed, the exit specified in the Log Full Exit option is called, and the next summary log file is opened to receive data.</p> <p>The Log Full Exit option is provided so that a user exit can be identified that will copy the data contained in the summary log file to another device before the file is overwritten with new summary log data. Sample code is provided for this exit in the Adabas Review source library member LOGUEXIT. Also provided is the summary log copy job, JCL library member REVCLCOP.</p> <p>If an exit is not specified, Adabas Review closes the filled summary log file and opens the next file; no provision is made for copying the data.</p>	<i>name</i>	none	Summary only

Logging Option	Description	Possible Values	Default	Valid for Report Type?
Log Size	<p>Specify the number of blocks to be allocated to each command log file (detailed reports) or summary log file (summary reports).</p> <p>Because command log records and summary log records vary in length, it is important to carefully determine the Log Size option value. The maximum length of a command or summary log record written by Adabas Review is 8 kilobytes.</p> <p>Log size is determined using the following formula:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> $\text{number-of-tracks} * ((\text{bytes-per-track}/9996) - 1)$ </div> <p>For Adabas Review command and summary logs, the blocking factor is 10,000 bytes per block.</p> <p>The following provides approximate values for tracks per cylinder and bytes per track for 3380 and 3390 devices:</p> <ul style="list-style-type: none"> ● 3380: 15 tracks per cylinder; 47,000 bytes per track ● 3390: 15 tracks per cylinder; 57,000 bytes per track <p>For example, the log size for 10 cylinders of a 3380 device is determined as follows:</p> <ul style="list-style-type: none"> ● Number of tracks is 15 x 10, or 150 tracks; ● Bytes per track/blocking factor is 47,000 / 10,000 = 4.7, or 4 blocks; ● Log size is 150 x 4, or 600 blocks. 	nnnnn	99999	Detailed and Summary
Num of Logs	<p>Specify the number of command log files (detailed reports) or summary log files (summary reports) to be used by a report.</p> <p>For every command log file or summary log file specified in the Num of Logs option, a file name is created by appending a number to the end of the file name prefix specified in the File or Summary File option. Each log file name must be coded in the Adabas startup procedure.</p> <p>For example, if File=RVLOG and Num of Logs=2, command log data will be written to files RVLOG01 and RVLOG02. And if Summary File=RVSUM and Num of Logs=3, summary log data will be written to files RVSUM01, RVSUM02, and RVSUM03.</p>	1-99 (z/OS) 1-9 (z/VSE)	2	Detailed and Summary
Summary File	<p>Specify the DD/file name prefix used to identify the file to which Adabas Review will write the summary log data. Each summary report that specifies summary logging must have its own file name prefix.</p>	5-byte name	RVSUM	Summary only

Logging Option	Description	Possible Values	Default	Valid for Report Type?
Summary Log	Specify whether Adabas Review will write summary logs for a particular summary report (Y), or whether summary logging will be ignored (N).	Y N	N	Summary only
User Exit	<p>Specify the name of the user exit that is called when a command log is filled during detailed report processing.</p> <p>Adabas Review writes to the command log files in sequential order. When a command log file is filled, the following actions occur: the file is closed, the exit specified in the User Exit option is called, and the next command log file is opened to receive data.</p> <p>The User Exit option is provided so that a user exit can be identified that will copy the data contained in the command log file to another device before the file is overwritten with new command log data. Sample code is provided for this exit in the Adabas Review source library member LOGUEXIT. Also provided is the command log copy job, JCL library member REVCLCOP.</p> <p>If an exit is not specified, Adabas Review closes the filled command log file and opens the next file; no provision is made for copying the data.</p>	<i>name</i>	none	Detailed only

Buffers to Log Options (Detailed Reports Only)

The Buffers to Log options specify which command log buffers will be included in command logging. These can only be specified for detailed reports.

The basic command log record, the ACBX, and the CLEX (corresponding to the ADARUN LOGACB, LOGCLEX, and LOGUX parameters) will always be logged in the log file, regardless of the settings of the Buffer to Log options. These are included in the record internally referred to as LORECR. The Buffer to Log options make it possible to log additional buffers such as the record buffer, the format buffer, and others.

You can determine whether data is logged by your report by setting the Adabas Review logging parameter that corresponds to a particular buffer (or set of buffers). The following table briefly describes the Buffers to Log options. These options are only applicable to detailed reports:

Buffer Logging Option	Description	Corresponding ADARUN Parameter	Possible Values	Default
FB	Specify whether the format buffer is logged.	LOGFB=YES	Y N	Y
SB	Specify whether the search buffer is logged.	LOGRB=YES	Y N	Y
RB	Specify whether the record buffer is logged.	LOGSB=YES	Y N	Y
VB	Specify whether the value buffer is logged.	LOGVB=YES	Y N	Y
IB	Specify whether the ISN buffer is logged.	LOGIB=YES	Y N	Y
IO	Specify whether the Adabas I/O information is logged.	LOGIO=YES	Y N	Y

Required Options for Logging

The following detailed report option settings are required for detailed reports that will log commands:

Detailed Report Option	Setting	Explanation
Log	Y	Yes indicates that the report performs command logging.
File	name	The five-character prefix of the DD/file name for the command log files.
Num of Logs	number	The total number of command log files allocated for the report.
Log Size	number	Number of blocks per data set. Data sets for a particular report must be the same size.

The following summary report option settings are required for summary logging:

Summary Report Option	Setting	Explanation
Summary Log	Y	Yes indicates that the report performs summary logging.
Summary File	name	The five-character prefix of the DD/file name for the summary log files.
Num of Logs	number	The total number of summary log files allocated for the report.
Log Size	number	Number of blocks per data set. Data sets for a particular report must be the same size.

Recommended Options for Logging

The following detailed report option settings are suggested for efficient command logging operations:

Detailed Report Option	Setting	Explanation
AutoStart	Y	Starts the command logging report when the database is initialized.
Print	N	Prevents each detailed data line from being printed; eliminates redundant recording of data and waste of spool space.
User Exit	exit name	Filled command logs are copied to another device before they are overwritten with new command log data.

The following summary report option settings are suggested for efficient summary logging operations:

Detailed Report Option	Setting	Explanation
AutoStart	Y	Starts the summary logging report when the database is initialized.
Print	N	Prevents each summary data line from being printed; eliminates redundant recording of data and waste of spool space.
Log Full Exit	exit name	Filled summary logs are copied to another device before they are overwritten with new summary log data.

Logging Guidelines

- Using the report option parameter PRINT=N, the printed detailed or summary report may be suppressed for a command log or summary log report.
- Processing rules may be used to restrict the collection of data for detailed reports (command logging) to certain values; e.g., all commands that return a nonzero response code.
- Before starting a report that performs detailed command logging, command log data sets must be allocated and the corresponding job control statements must be added to the Adabas startup JCL. Likewise, before starting a report that performs summary logging, summary log data sets must be allocated and the corresponding job control statements must be added to the Adabas startup JCL.
- If you use a user exit to copy a filled command log or summary log to another device, refer to the sample user exit code in the source library member REV*vs*.SRCE(LOGUEXIT). The command or summary log copy job is provided in JCL library member REV*vs*.JCL(REVCLCOP).

History Options

History data is useful for monitoring database performance for a given period of time and for performing trend analysis. History options specify whether history data is collected, when it is collected, and where (that is, in which Adabas Review repository) it is stored.

Although history data may be written for both detailed and summary reports, the report type plays a key role in determining how Adabas Review processes history data.

- A *detailed report* maintains a one-to-one correspondence between a command log record read or passed to ADARVU and an output record produced by Adabas Review. When the command processed by Adabas Review satisfies the report processing rules, Adabas Review builds the required format and record buffer using the current report definition and immediately stores a record in the Adabas Review repository.
- A *summary report* has a many-to-one relationship between processed records and the summarized output record. Multiple records are processed (i.e., summarized) to produce one output record. When the Adabas Review interactive processor is running, information is written out to the Adabas Review repository at Adabas termination, when an interval is reached, or when the report is closed. If the Adabas Review batch processor is being executed, the data is written during end-of-file (EOF) processing.
- For both types of reports, Adabas Review generates a Natural display program so that history data may be viewed online.

The history options that determine whether and how Adabas Review writes history data are set when you create or edit the report definition on the Report Options screen. If history data is to be written by a report running in batch mode, the history parameters make up the COPY statement.

The following table describes (in alphabetic order) the history options that can appear on the Report Options screen. The "Valid for Report Type" column in the table indicates whether the option is valid for detailed reports or summary reports (or both) -- although, in the case of history options, all options work for both types.

History Option	Description	Possible Values	Default	Valid for Report Type?
History	Specify whether the data collected by the report is to be written to an Adabas Review repository and stored as history data. If (N), all other history options are ignored.	Y N	N	Detailed and Summary

History Option	Description	Possible Values	Default	Valid for Report Type?
History Int	<p>Specify the history interval in minutes. This is the time interval during which history data is collected by the report. At each interval, the report prints its output if PRINT=Y and stores any history data. The report is then deleted. If RESTART=Y, the report is then restarted.</p> <p>If the History Int option is used, history data is written to the Adabas Review repository at the interval specified, provided the database containing the Adabas Review repository is active.</p> <p>To write history data at regular intervals (e.g., every hour), you must also set the Restart report option (Rstrt) to Y, so that the report is restarted after the interval has been reached. This option is listed in the Report Options column of the Report Optionsscreen.</p> <p>Note: If the Rstrt=Y is specified, all history data for the report is written to the Adabas Review repository file if the MAX K value for the report is exceeded.</p> <p>If the History Int option is <i>not</i> used, history data is written to the Adabas Review repository at Adabas termination.</p>	number of minutes	none	Detailed and Summary
History DBID	<p>Specify the ID number of the database that is to store the history data; that is, the Adabas Review repository.</p> <p>The default is the database ID of the Adabas Review repository to which you currently have access.</p> <p>You may change this parameter, provided it specifies (in conjunction with the History FNR and History SVC options) a different Adabas Review repository.</p>	<i>dbid</i>	current DBID	Detailed and Summary

History Option	Description	Possible Values	Default	Valid for Report Type?
History FNR	<p>Specify the file number in the Adabas Review repository that is to contain the history data.</p> <p>The default is the file number in the Adabas Review repository to which you currently have access.</p> <p>You may change this parameter, provided it specifies (in conjunction with the History DBID and History SVC options) a different Adabas Review repository.</p>	<i>fnr</i>	current file number	Detailed and Summary
History SVC	<p>Specify the Adabas SVC number used to communicate with the Adabas Review repository in order to write the history data.</p> <p>The default is the SVC number of the Adabas Review repository that you are currently accessing, if that database appears on the Target Definitions screen (LT function). Otherwise, the default is the SVC number of the default database listed on the Target Definitions screen.</p> <p>You may change this parameter, provided it specifies (in conjunction with the History DBID and History FNR options) a different Adabas Review repository.</p>	<i>svc</i>	current SVC number or SVC of default DBID	Detailed and Summary

Report Exit Options

Adabas Review provides two report user exits: one for detailed reports and one for summary reports.

- A detailed report user exit is called when a command log record is selected for the report. Only records that pass the processing rules are provided to the user exit. This exit may be used to create SMF records, accounting records, or for any other purpose.
- A summary report user exit is called when a specified Adabas command is selected for the report; and/or a report is summarized. You may control the conditions that trigger the exit.

When creating a report, the user exit name (1-8 characters) is specified on the Report Options screen or in the batch REPORT statement. The actual report user exit must be provided in an executable library accessible to Adabas Review.

This section covers the following topics:

- Detailed Report User Exit Options

- Summary Report User Exit Options

Detailed Report User Exit Options

Adabas Review provides a detailed report user exit that is called when a command log record is selected for the report. Only records that pass the processing rules are provided to the user exit.

This exit may be used to create SMF records, accounting records, or for any other purpose.

To invoke the user exit:

1. Specify the name of the user exit when creating the report.

For an online report, enter the exit name in the Exit Name field in the Detail Exit area of the Report Options screen.

When defining batch parameters, specify TYPE=DETAIL and the REPORT-EXIT= keyword of the REPORT statement. Read *REPORT Statement* in *Using Batch Facilities* for more information.

2. Provide the detailed report user exit in an executable library accessible to Adabas Review.

The detailed report user exit receives control using standard linkage:

R1	Address of the parameter list
R13	18 fullword savearea address
R14	Return address
R15	Entry-point address of the user exit

The parameter list contains two entries:

A(0)	Reserved for future use
A(LOGREC)	Address of the command log record

Summary Report User Exit Options

Adabas Review provides a summary report user exit that is called whenever:

- A specified Adabas command is selected for the report
- A report is summarized.

A report is summarized when it is:

- Closed or purged from the LS screen;
- Closed by an interval event;
- Deactivated because the MAXSTORE limit was exceeded; or


- Running when Adabas Review is terminated.

You may control the conditions that trigger the exit.

A report calling a summary exit is limited to one account (Order) field. If a summary report exit is specified and the report has multiple account fields, syntax error message REV00408 is issued.

- Invoking the Summary Exit
- Summary Exit Record
- Return Codes

Invoking the Summary Exit

 **To invoke the user exit:**

1. Specify the name of the user exit when creating the report.

For an online report, enter the exit name in the Exit Name field in the Summary Exit area of the Report Options screen.

To control the conditions that drive the exit, the Report Options screen allows you to enter an Adabas command (Cmd field) and specify whether to call the exit at summarization time (Sum field). If the Adabas command field is left blank, the exit is only called when the report is summarized. If SUM is set to "N" and the Adabas command field is blank, the exit is never called.

When defining batch parameters, specify TYPE=SUMMARY and the SUMMARY-EXIT= keyword of the REPORT statement. Read about the *REPORT Statement* in *Using Batch Facilities* for more information.

2. Provide the summary report user exit in an executable library accessible to Adabas Review.

The summary report user exit receives control using standard linkage:

R1	Address of the parameter list
R13	18 fullword savearea address
R14	Return address
R15	Entry-point address of the user exit / Return code upon return

The parameter list contains the following entries:

Offset	Address of . . .						
0	the reason for being called. This is a one-byte binary bit map. <table border="0" style="margin-left: 20px;"> <tr> <td style="padding-right: 20px;">X'80'</td> <td>The exit was called because the specified command was selected.</td> </tr> <tr> <td>X'40'</td> <td>The exit was called during summary processing.</td> </tr> <tr> <td>X'01'</td> <td>If this bit is on in addition to one of the above, it indicates that this is the last account entry for the report.</td> </tr> </table>	X'80'	The exit was called because the specified command was selected.	X'40'	The exit was called during summary processing.	X'01'	If this bit is on in addition to one of the above, it indicates that this is the last account entry for the report.
X'80'	The exit was called because the specified command was selected.						
X'40'	The exit was called during summary processing.						
X'01'	If this bit is on in addition to one of the above, it indicates that this is the last account entry for the report.						
4	the Adabas command. This is a two-byte character field. If the exit was called with X'80', the field indicates the Adabas command that is used as a trigger.						
8	the report name. This is a 32-byte character field.						
12	the summary record.						

Summary Exit Record

The summary record is a variable length record that contains the field names and values for the report. It has a fixed portion and a variable portion.

Note:

The layout of the summary exit record is different from the layout of the summary record written to the summary log file.

Here is the summary exit record layout:

```
*****
*   FIXED PORTION OF SUMMARY RECORD   *
*****
RECLN   DS   H           TOTAL RECORD LENGTH (INCLUSIVE)
          DS   H           UNUSED
SUMCOUNT DS   H       NUMBER OF SUMMARY ENTRIES
SOFFSET DS   H       OFFSET OF SUMMARY PORTION
ACCLN   DS   H           LENGTH OF ACCOUNT DATA
ACCTNAME DS   CL8      NAME OF ACCOUNT FIELD
*
*****
*   VARIABLE PORTION OF SUMMARY RECORD   *
*****
ACCTDATA DS   0CL1      START OF ACCOUNT DATA
ACCTPAD  DS   0CL1      PADS OUT TO DOUBLEWORD
SUMFLD   DS   0CL8      NAME OF SUMMARY FIELD
SUMVAL   DS   0XL8      VALUE OF SUMMARY FIELD
```

The exit is called for each account entry (Order Field) in the report.

The last two fields above repeat for each summary field in the report.

All fields names are 8-byte character fields.

All summary data values are 8-byte binary fields.

The ACCTDATA field above always starts at the same offset, but its length is variable.

Return Codes

Upon returning from the exit, the user is responsible for setting a return code in R15:

R15 = 0	A zero return code indicates a normal return.
R15 # 0	A nonzero return codes indicates that the user requested the system to zero all summary data for this account entry.