



Adabas Audit Data Retrieval

Administrator Guide

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Introduction

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Introducing Adabas Audit Data Retrieval

Overview

Adabas Auditing for z/OS (ALA) is an extension for Adabas/Natural, which provides the following functions:

- Filtering, saving, and archiving of Adabas logs in a unified format
- Retrieving logs based on customer-specific search criteria
- Displaying search results

Adabas Auditing for z/OS (ALA) is able to answer questions like:

- When was the data accessed?
- Who accessed the data?
- Which data was affected by the access?
- Which type of access took place (read, update, delete, insert)?

Components

Adabas Auditing for z/OS (ALA) comprises the following components:

- Adabas Event Hub (EAB)

This component selects, filters, and prepares Adabas audit data for indexing by the Adabas Audit Data Retrieval (AAR) component. The extracted data is stored in so-called ALOG datasets.

The Adabas Manager (AMN), which is the graphical user interface (GUI) for the administration of Adabas, provides functionality to support ALA/EAB administration.

- Adabas Audit Data Retrieval (AAR)

This component imports the ALOG datasets into its database and creates appropriate indexes to enable fast retrieval.

The indexed data can be archived on various storage systems, for example, on tape or on optical disks.

- Adabas Audit Data Viewer (AAV)

This component is the web user interface that enables end users to search and display the data that has been indexed by the Adabas Audit Data Retrieval (AAR) component.

Adabas Audit Data Retrieval features

- Adabas Audit Data Retrieval indexes and archives lists and allows online retrieval and viewing for multiple users.
- Adabas Audit Data Retrieval builds indexes for your log datasets according to the structure information included in the logs. It is also possible to create your own index definitions if additional processing instructions are needed.
- Administrators can access definitions and indexed lists with the help of panels on 3270-type terminals. The end-user tool for accessing the indexed data is Adabas Audit Data Viewer (AAV).

Host components

Adabas Audit Data Retrieval runs as a subsystem on your z/OS host computer. Adabas Audit Data Retrieval includes the following components on the host:

- The started task (B97STC) provides access to the Adabas Audit Data Retrieval database and controls communication between the various components.
- The reader program (B97RDR00) reads Adabas log audit datasets (ALOG datasets) and processes the contained data according to the definitions in the Adabas Audit Data Retrieval database and the structure information included in the datasets.
- An ISPF application to access definitions and indexed lists via a 3270-type terminal
- Various maintenance batch utilities (archive, reload, cleanup)

Two-digit numeric identifier

97 is the identifying number of Adabas Audit Data Retrieval. You will see the identifying number in:

- Program and job names like B97DLOAD
- LST parameters (B97_SSID)
- LST member name (B97LSTxx)
- System identifier in the JCL ('S=97')

How to use this manual

Overview

This manual describes how to administer Adabas Audit Data Retrieval. It contains information on the following:

- Index, list, and archive definitions
- Regular maintenance jobs

Structure and conventions of the documentation

If necessary, familiarize yourself with the structure and the conventions of the documentation first by reading the following two sections.

Finding information

To find more detailed information on a given topic, use the index or table of contents to locate the corresponding section in the manual.

To find more detailed information on a given panel, you can also make use of the online help tutorials of the ISPF application.

Structure of the documentation

Overview	<p>Adabas Audit Data Retrieval is based on Beta Systems Architecture (BSA).</p> <p>The following manuals are available for Adabas Audit Data Retrieval and BSA.</p>
Adabas Audit Data Retrieval Administrator Guide	<p>This manual describes how to use Adabas Audit Data Retrieval to perform administrative tasks. It includes the following:</p> <ul style="list-style-type: none">• Step-by-step instructions for defining indexes• Task-oriented information on using the batch utilities• Reference information for panels and batch utilities
Adabas Audit Data Retrieval Installation and System Guide	<p>This manual includes the following:</p> <ul style="list-style-type: none">• Product installation and customization• Batch utilities• Security considerations• Operator console commands
Adabas Audit Data Retrieval Messages and Codes	<p>This manual includes the following:</p> <ul style="list-style-type: none">• Adabas Audit Data Retrieval system messages (message range: 1000 through 7999)• User abend codes
BSA Installation and System Guide	<p>This manual includes the following:</p> <ul style="list-style-type: none">• BSA installation and customization• Global system information
BSA Messages and Codes	<p>This manual includes the following:</p> <ul style="list-style-type: none">• BSA component system messages (message range: 8000 through 9999)• User abend codes
BSA Service Manager Manual	<p>This manual includes the following:</p> <ul style="list-style-type: none">• General description of the BSA Service Manager application

Conventions used in this manual

Sideheads

The manuals of Adabas Audit Data Retrieval contain different types of information:

- Task-based information, for example, procedures containing a sequence of numbered steps
- Reference information, for example, panel and field descriptions

The sideheads in the margin help you locate the required information quickly.

Keys

All keys are written in uppercase letters. Function keys (also called program function keys) are referred to as PF*n*, for example:

Use PF11 to scroll to the right and PF10 to scroll to the left.

Panel navigation

All procedures and panel descriptions use the "Primary Selection Menu" as point of reference. For example:

To display the system profile options:

- From the "Primary Selection Menu", select option **P.2**.

You don't have to enter these options in separate steps and you don't have to return to the "Primary Selection Menu" all the time. Do the following to access the "Beta System Profile Options" panel in one step:

Enter ...	in the command line to call this panel from ...
P.2	the Adabas Audit Data Retrieval "Primary Selection Menu"
=P.2	any Adabas Audit Data Retrieval panel Note: The ISPF jump function is not available under VDF.

Panels

Panels are displayed in a monospaced font and framed in a box, as in the following example. As a rule, the entire panel is displayed.

The following applies to the displayed panels:

- The padding character for required fields is the dot (.) and the padding character for optional fields is the underline character (_).
- The panel ID is displayed in the top-left corner of the panel. (You can turn this display on or off using the primary command PANELID.)

```

PEB0PRF -----
Command ==> _____

Beta System Profile Options

System Name          ==> B97PROD.
System Location      ==> BERLIN.....
Subsystem ID         : B97P
System Level         :           BSA Level      :
System PTF Level     :           BSA PTF Level  :

User Date Mask       ==> MM/DD/YYYY   MM/DD/YY, DD.MM.YY, DD/MM/YY, YY.DDD
                    MM/DD/YYYY, DD.MM.YYYY, DD/MM/YYYY
                    YYYY.DDD, YYYY-MM-DD
Beta Product Language ==> E           (E)nglish,(G)erman
Extended Help Mode   ==> YES         (Y)es, (N)o

Press the ENTER key to update your system profile options.
Press the END key to return to the previous menu.

```

JCL

JCL is displayed in a small monospaced font and framed in a dashed box. Lowercase italic characters are used for generic cards and variables.

```

+-----+
| jobcard |
| //B97DLOAD EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97', |
| ///          'PGM=B97DLOAD', |
| ///          'B01LST=xx', |
| ///          'B97LST=xx', |
| ///          'SIGNON=YES') |
| //STEPLIB DD DISP=SHR, |
| ///          DSN=BETA97.LOAD |
| ///          DD DISP=SHR, |
| ///          DSN=BSA.LOAD |
| ///* |
| //B97DEF DD DISP=SHR, |
| ///          DSN=BETA97.DB.DEF |
| //SFFPARM DD DISP=SHR, |
| ///          DSN=BETA.PARMLIB |
| ... |
+-----+

```

The values in lowercase italic characters must be replaced with the appropriate values, for example *xx*, which stands for the last two digits of the members *B01LSTxx* and *B97LSTxx*.

Dataset names

The manual uses the high-level qualifier BETA for libraries that are typically shared by BSA and the Beta Systems products. For example, BETA.PARMLIB is used to refer to the Beta parameter library.

The manual uses the high-level qualifier BETA97 for Adabas Audit Data Retrieval libraries and databases. BSA is used for libraries of Beta Systems Architecture. For example, BETA97.LOAD is used for the Adabas Audit Data Retrieval load module library, and BSA.LOAD is used for the BSA load module library.

Libraries and databases at your data center will most likely have different names. Make sure that your JCL has the correct high-level qualifiers, which comply to the conventions used at your data center.

Listings and reports

Like JCL, listings and reports are also displayed in a small monospaced font and framed in a dashed box.

Console commands

Console commands are displayed in a large monospaced font. For example:

```
To start the product started task, enter the following console command:
```

```
S stcname
```

```
where stcname must be replaced with the name of the product started task.
```

Primary commands

Primary commands are displayed in uppercase letters. To execute a primary command, type the primary command in the command line and press ENTER.

Many primary commands have a long form and one or several short forms. Instructions in this manual use the long form of the primary command and include short forms in parentheses. For example:

```
In the Beta Browser, enter the primary command LASTPAGE (LP) to display the last hit page.
```

Generic names and variables

Generic names and variables are displayed in lowercase italic letters. For example:

```
To display a specific page in the Beta Browser, enter the following primary commands (long or short form):
```

```
PAGE n (P n)
```

```
where n must be replaced with the desired page number.
```

Allowed values

Allowed values are separated using a vertical bar (|). Square brackets indicate that a parameter is optional.

For example, the primary command PAGEBREAK ON (PBR ON) turns the display of page breaks on, the primary command PAGEBREAK OFF (PBR OFF) turns the display of page breaks off, and the primary command PAGEBREAK (PBR) without any parameters toggles between the two. This is indicated in the syntax of the primary command as follows:

```
PBR [ON|OFF]
```

Line commands

Line commands are written in bold uppercase letters. Line commands consist of one, two, or three characters. The manual shows available line commands like this:

A	Description of line command A
AB	Description of line command AB

To execute a line command, type the line command in the **Sel** column of the table in front of the desired entry and press ENTER.

The available line commands are displayed in ISPF tables underneath the panel title. Depending on the table type, you can switch this display off by entering **Extended help = No** in your profile (option **P.2**).

You can also switch the display on and off with the primary commands PROF HL OFF and PROF HL ON.

Keyword and positional parameters

Keyword parameters and positional parameters are displayed in a monospaced font using the following syntax:

```
PARM='ssid[,TRACE=Y|N]'
```

ssid is a required positional parameter where *ssid* refers to the subsystem ID. The subsequent keyword parameter is optional, which is indicated by square brackets. A vertical bar separates alternative values. Keywords are displayed in uppercase letters.

Double-dot operator

The double-dot operator between integers indicates a range of integer values. For example, **2..5** expands to a list containing the values **2, 3, 4, and 5**.

How does Adabas Audit Data Retrieval work

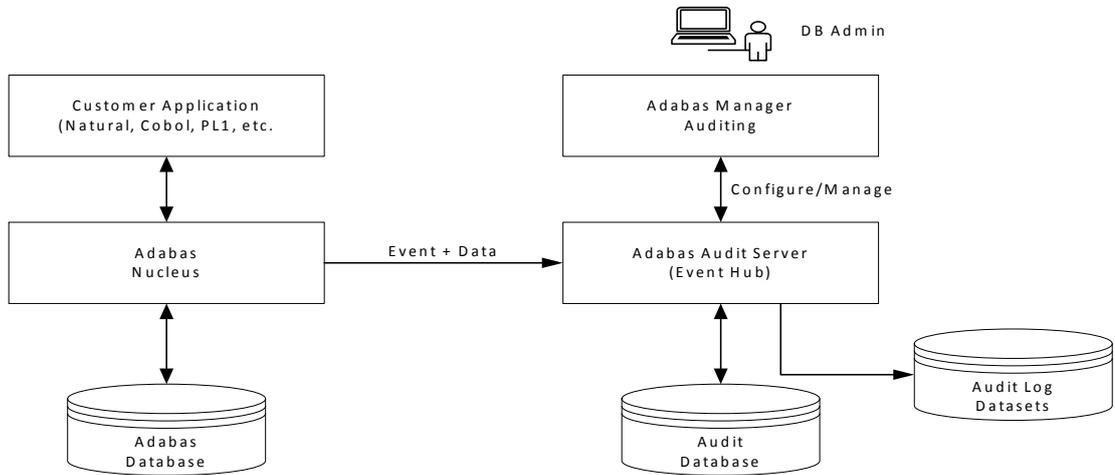
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Adabas auditing workflow

Overview The Adabas database administrator uses Adabas Manager to define which files should be audited.

Subscriptions A profile describes what an auditor is subscribing to.
Filter options contain rules for including and excluding records for auditing.

Workflow



Adabas Audit Server While it processes the commands that request access to the database, the Adabas nucleus sends the data of all files being audited to the Adabas Audit Server.

Audit log (ALOG) datasets Adabas Audit Server writes formatted audit data to datasets as a sequential log.

Audit ID Each audited file has an audit ID. The audit ID is a timestamp which uniquely identifies a combination of audited fields.

The unique audit ID is assigned to an 8-digit audit ID name by the database administrator.

Metadata for the fields is included in the ALOG dataset. All extracted records that are based on a specific subscription have the same field structure.

Indexing and retrieval The AAR reader program imports the generated audit log (ALOG) datasets into Adabas Audit Data Retrieval for indexing.

Indexed data is available for retrieval by the Adabas Audit Data Viewer (AAV) component.

Adabas Audit Data Retrieval (AAR) import workflow

Overview

The reader program B97RDR00 imports the generated audit log (ALOG) datasets into Adabas Audit Data Retrieval for archiving and retrieval.

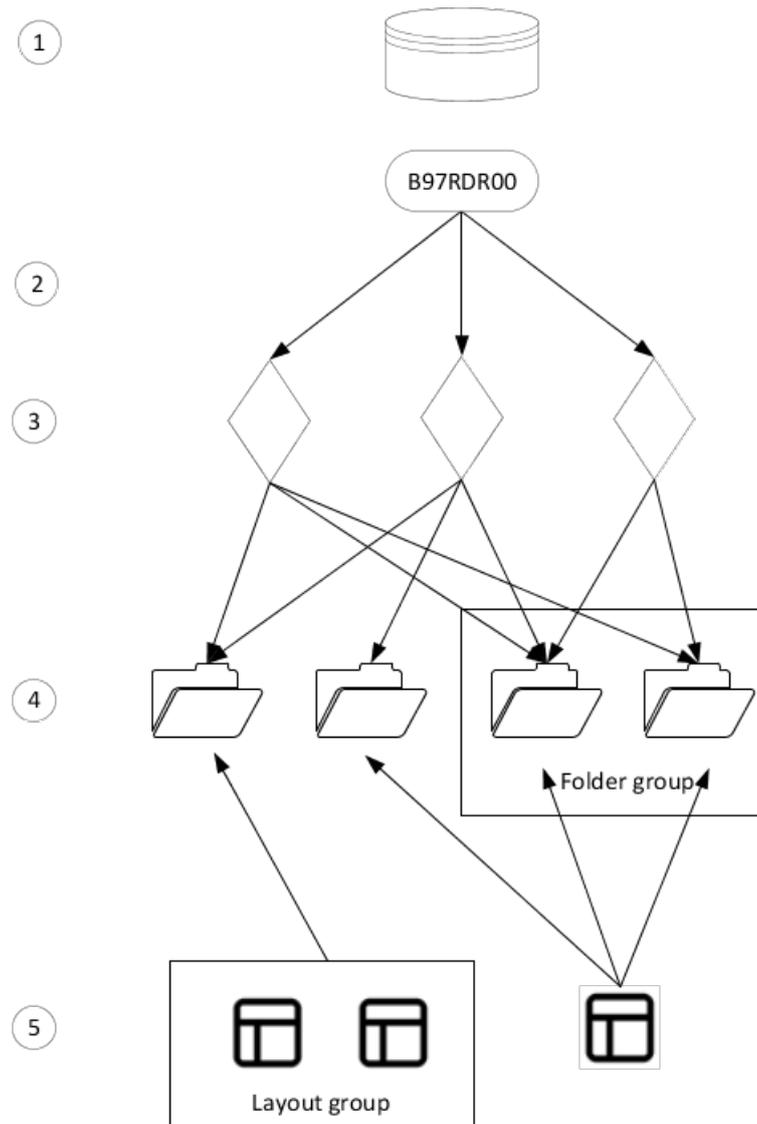
B97RDR00

The Adabas Audit Data Retrieval reader program B97RDR00 is called in a batch job. The ALOG dataset to be processed is specified as input dataset in the JCL.

The JCL of the reader program B97RDR00 is described in "Adabas Audit Data Retrieval reader program (B97RDR00)" in *Adabas Audit Data Retrieval Installation and System Guide*.

AAR import workflow

The following figure illustrates the AAR import workflow:



1. The audit log (ALOG) dataset is a sequential file containing mixed data types.
2. The reader program B97RDR00 splits ALOG data into time-sequenced files (lists) by audit ID while reading in.
Each new generation of a list is identified by a unique timestamp.
3. Each new list gets a two-part (audit/subscription) or three-part name (audit/subscription/userview).
Audit, subscription, and userview name are mapped to the AAR equivalents form, extension, and report name.
Adabas Audit Data Retrieval automatically creates indexes according to the metadata (field description) contained in the ALOG dataset.
Other aspects of the processing of each list generation are determined by definitions at different levels (folder, list, index, etc.) in Adabas Audit Data Retrieval.
4. During import, Adabas Audit Data Retrieval also assigns each list to one or more folders, which are used for grouping lists (by business means). Folders can be grouped into folder groups.
Processing instructions for global indexes are defined at the folder level. Folders also determine the layout(s) used for search queries.
5. Layouts determine which indexes are available to the user for research. Layouts can be grouped into layout groups.

Name mapping

During import, B97RDR00 maps the names contained in the metadata of the ALOG dataset to the AAR equivalents as follows:

ALOG metadata	AAR equivalents	Maximum length
Audit name	Form name	8 bytes
Subscription name	Extension name	8/16 bytes
Userview name	Report name	16 bytes

Note on subscription/extension: The maximum length of the subscription name is 8 bytes. The maximum length of the extension name is 16 bytes. The IRMIN parameter SUBSCRIPT_EXT enables you to add a max. 8-byte string as prefix or suffix to the subscription name during import to make use of the maximum length in Adabas Audit Data Retrieval. For more information, see "Adabas Audit Data Retrieval reader program (B97RDR00)" in *Adabas Audit Data Retrieval Installation and System Guide*.

List definition matching

All imported list generations are processed according to the rules of a list definition. These rules control the generation of indexes, online/archive retention, etc.

B97RDR00 finds the best-matching definition for each list via the three-part name. The first match encountered in this sequence is used:

1. *form(alog) / extension(alog) / report(alog)*
2. *form(alog) / extension(alog)*
3. *defaultform / defaultextension / defaultreport*

form(alog), *extension(alog)*, and *report(alog)* refer to the audit, subscription and userview names extracted from the metadata of the ALOG dataset.

defaultform, *defaultextension*, and *defaultreport* are the default values defined via the corresponding IRMIN parameters for the reader job (see "Adabas Audit Data Retrieval reader program (B97RDR00)" in *Adabas Audit Data Retrieval Installation and System Guide*).

Default list

If the reader job cannot find a matching definition for audit/subscription[/userview] (*form/extension[/report]*), the data is read in under the default name specified in the job parameters.

A matching list definition for *defaultform / defaultextension / defaultreport* must exist. The reader job ends with an error if there is no list definition that matches the default name.

The DEFAULTFORM parameter is required. The parameters DEFAULTEXTENSION and DEFAULTREPORT are optional. Blank will be used as default names for extension and report if the corresponding parameters are not specified.

All records of the ALOG dataset that are not part of a transaction identified by audit/subscription/userview are also read into Adabas Audit Data Retrieval under the name of the default list.

Required definitions in Adabas Audit Data Retrieval

Introduction

Certain definition must be present in the Adabas Audit Data Retrieval system for the reader job to be able to process the contents of an ALOG dataset, which is read in as one or more lists.

This section gives an overview of the definitions used by Adabas Audit Data Retrieval for the generation of list indexes.

List definitions (required)

A matching list definition has to exist in Adabas Audit Data Retrieval (Option 2.1) for each list that is to be read in.

The reader program (B97RDR00) retrieves list names (audit, subscription, userview) from the audit data and maps them to the AAR equivalents (form, extension, report). B97RDR00 finds the best-matching definition for each list via the three-part name (see "Adabas Audit Data Retrieval (AAR) import workflow" on page 18).

Required settings

Lists must be defined as item lists. Indexing and display are page-based in Adabas Audit Data Retrieval and an item is treated like a logical page. One item contains the data that belongs to one Adabas database transaction, which includes information on client, request, and command data (after image if insert, before image if delete, before and after image if update).

The following panel shows the required settings, which can be found on page 3 of the list definition panel:

```

PE97LD22 ----- Page 3 of 3
Command ==> _____

Update List/Report Definition      Last Update: MALIK1   2020-11-17 13:11:15

Form: FNR100      Extension: QASF100      Report: FILE_100

Read-In and Display Processing Parameters :

Copy to Local Spool      ==> YES          (Y)es,(N)o
Document Stack           ==> NO          (Y)es,(N)o
Indexing without Definition ==> YES          (Y)es,(N)o

Item Processing Mode     ==> YES          (Y)es,(N)o
Item Display Mode       ==> YES          (Y)es,(N)o

Layout                   ==> _____ (Name or Mask)

Press ENTER to update the definition. Press UP to display the previous page.
Press END to return to the previous panel.

```

Indexing without Definition causes indexes to be created automatically based on the information contained in the metadata of the ALOG datasets.

For detailed information on list definitions, see "List definitions (Option 2.1)" on page 60.

**Index definitions
(optional)**

The reader program (B97RDR00) will retrieve instructions for indexing from the metadata of the ALOG dataset if **Indexing without Definition** is set to YES in the list definition.

Optionally, you can also create index definitions for each list definition. Indexes are defined locally under an index name for each list (Option **2.1**, line command **IX**). An index definition contains specifications on what to index under which name.

The reader job will apply the instructions contained in the audit dataset and the instructions contained in the index definitions during indexing.

Note on index type: Adabas Audit Data Retrieval supports different types of indexes (see "Index types" on page 24). Primary and global indexes can be created according to the instructions contained in the audit dataset and index definitions. The creation of secondary indexes requires index definitions.

Note on instance number: If you need more than one index definition for an index (for example, because the information to be indexed is located at several positions or because identifiers vary), define several instances of the index under the same index name. The values of all instances are stored in the same index. The combination of index name and instance number must be unique.

For detailed information on index definitions, see "Index definitions for lists" on page 64.

**Folder definitions
(required)**

For retrieval, AAV relies on the presence of global indexes. Global indexes are generated in batch by a separate program (B97GLOBL).

Processing instructions for global indexes are defined at the folder level. A list must be assigned to at least one folder if the generation of global indexes is defined for this list.

If index definitions or metadata specify the generation of a global index, the reading in of the list will fail if the list is not assigned to a folder.

Each folder has a layout group assigned to it. The layouts of the layout group define the input fields for the index search.

For more information on folders, see:

- "Folders (Option 2.4)" on page 88
- "Assigning lists to a folder" on page 90
- "Processing instructions for global indexes" on page 92

For more information on B97GLOBL, see "B97GLOBL: Global index batch utility" on page 295.

Folder group definitions (required)

For retrieval, AAV relies on the presence of folder groups. Folder groups, folders, layout groups, and layouts are displayed in the form of an expandable tree structure.

Use a one-to-one relationship between folder group and folder if you don't want to group folders.

For more information on folder groups, see "Folder groups (2.5 GROUPS)" on page 94.

Layouts (required)

Layouts are required for global indexes. A layout defines a query mask with input fields for the index search.

Optionally, layouts can be grouped into layout groups. Use a one-to-one relationship between layout group and layout if you don't want to group layouts.

Specify the name of the layout group in the folder or folder group definition.

For more information on layouts and layout groups, see "User-defined query masks (Option 2.6)" on page 96.

Index types

Overview

Adabas Audit Data Retrieval supports different index types:

- Local Indexes

A local index is list-based. Each local index generation contains values of one list generation.

Local indexes are used to **search within** a specific list. Adabas Audit Data Retrieval supports two types of local indexes:

- A primary index stores the indexed values in alphabetical order. This is the normal case.
- A secondary index stores indexed values ordered by page numbers (item numbers) (see "Secondary indexes" on page 77).

- Global Indexes

A global index is a cross-list index which contains the values of multiple index generations.

Global indexes are used to **search for** lists via indexed contents.

Updating the global index

Local indexes are created as lists are read in. Global indexes are created or updated by the batch utility B97GLOBL.

The following actions are carried out during each B97GLOBL run:

- The hit-lists of the newly created primary indexes are merged with the existing hit-lists of the global index.

Doublets are deleted from the hit-lists prior to the merge because storing a single occurrence of each hit per list is enough for finding the list.
- The hits of lists that have expired are deleted from the global index.

Global index requires a local index

Local primary indexes must exist in order to create a global index.

Both index types are used for the search of hits in a list:

- The list is found via the global index(es).
- The hits in the list are found via the local index(es).

Online/Offline

Global indexes always remain online.

Primary indexes must remain online at least until B97GLOBL has merged them into the corresponding global indexes. The insertion of primary indexes that are offline is not supported.

After a primary index has been inserted successfully by the batch utility B97GLOBL, the primary index is no longer required for updating the global index and can be online or offline.

ISPF application

In this chapter	Topic	Page
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	Panel structure.....	28
	Navigating the ISPF panels	30
	Selecting, displaying, and updating definitions.....	32
	Using online help	35
	Printing tables (TPRINT)	36

Primary Selection Menu

Overview

The Primary Selection Menu gives access to the Adabas Audit Data Retrieval ISPF application. By default, it is the first panel to be displayed when you call Adabas Audit Data Retrieval.

Primary Selection Menu

This is the Adabas Audit Data Retrieval Primary Selection Menu:

```

PE97PRIM -----
Option ==>> _____

Primary Selection Menu                                System - PROD
                                                    Location - BERLIN
                                                    Subsys-ID - B97P
                                                    User ID - B97USER

1 BROWSE      - Display or Print Lists and Reports
I INDEX       - Display or Print Lists and Reports (Index Selection)
G GLOBAL      - Display or Print Lists and Reports (Global Index Search)

2 DEFINE      - Display Definitions Selection Menu
3 UTILITIES   - Display System Utilities Selection Menu
A ARCHIVE     - Display Archive Options Selection Menu

S SYSTEM      - Display System Options Selection Menu
C CUSTOMIZE   - Display System Customization Menu
P PROFILE     - Display User Profile Menu

M MESSAGES    - Display Log Messages
D DATABASE    - Display Service and Database Selection Menu

Select one of the above options. Press the END key to exit.

```

Options

Use option ...	to do the following ...
1 BROWSE	Selecting indexed lists and retrieving information
I INDEX	Similar to option 1, but contains additional fields for selecting lists via the names of indexes created for the lists
G GLOBAL	<ul style="list-style-type: none"> Finding lists with the help of the global index
2 DEFINE	<ul style="list-style-type: none"> Defining how to index lists (includes list and index definitions, index descriptions, and layouts for index retrieval) Defining folders and folder groups
3 UTILITIES	<ul style="list-style-type: none"> Displaying the internal global index records Displaying reload requests
A ARCHIVE	<ul style="list-style-type: none"> Defining archive pools, archive subpools, and archive devices Displaying archive information
S SYSTEM	<ul style="list-style-type: none"> Defining system defaults for the Adabas Audit Data Retrieval subsystem Generating JCL for batch utilities

Use option ...	to do the following ...
C CUSTOMIZE	<ul style="list-style-type: none"> • Defining macros and views • Defining Adabas Audit Data Retrieval users (VCI table) • Creating layouts for the "List/Report Selection Table"
P PROFILE	<ul style="list-style-type: none"> • Defining a user profile, including colors and effects, date mask, language, and default jobcard • Creating a user-defined layout for the List/Report Selection table • Selecting a Adabas Audit Data Retrieval subsystem • Displaying the PTF level of the selected Adabas Audit Data Retrieval subsystem
M MESSAGES	<ul style="list-style-type: none"> • Displaying messages written by the Adabas Audit Data Retrieval started tasks and by the Adabas Audit Data Retrieval batch utilities
D DATABASE	<ul style="list-style-type: none"> • Displaying the Adabas Audit Data Retrieval database and its current usage • Defining and formatting additional spool models for lists and indexes • Exploring the structure of the Adabas Audit Data Retrieval database (tables, fields, and keys) • Generating JCL for BSA database utilities • Creating database queries using Beta Query Language (BQL) • Calling the BSA Service Manager

Panel structure

Overview

This section shows the complete structure of the Adabas Audit Data Retrieval panels.

The page references or hyperlinks refer to the section where the corresponding option is described in this manual. Options without a page reference or hyperlink are not described in this manual.

Panel structure

Primary Selection Menu (see page 26)

- 1 BROWSE (see page 40)
- I INDEX (see page 46)
- G GLOBAL
- 2 DEFINE (see page 59)
 - 1 LIST (see page 60)
 - 2 SEARCH (see page 84)
 - 3 INDEX (see page 85)
 - 4 FOLDER (see page 88)
 - 5 GROUP (see page 94)
 - 6 LAYOUT (see page 101)
- 3 UTILITIES
 - 1 READER (see page 112)
 - 2 LIST (see page 112)
 - 3 RELOAD (see page 117)
- A ARCHIVE
 - 1 DEFINITION (see page 131)
 - 2 DATASETS (see page 154)
 - 3 VOLUMES (see page 157)
 - 4 DEVICES (see page 162)
- S SYSTEM
 - 1 REMOTE (see page 205)
 - 2 SYSTEM (see page 206)
 - 3 BATCH (see page 211)
 - D DAILY (see page 264)
 - 1 ARCHIVE (see page 227)
 - 2 RELOAD (see page 305)
 - 3 ONL-CLEANUP (see page 280)
 - 4 ARC-CLEANUP (see page 269)
 - 5 LOG-CLEANUP (see page 275)
 - 6 CCH-CLEANUP (see page 273)
 - 7 NTE-CLEANUP (see page 278)
 - 4 REPORT (see page 213)

(continued)

(continued)

C CUSTOMIZE

- 1 USER (see page 189)
- 2 MACRO
- 3 LAYOUT (see page 197)

P PROFILE

- 1 COLOR (see page 173)
- 2 SYSTEM (see page 176)
- 3 USER (see page 179)
- 4 BROWSER (see page 180)
- 5 LAYOUT (see page 184)

M MESSAGES (see page 216)

D DATABASE (see page 320)

- 1 DATABASE (see page 323)
- 2 DICTIONARY
 - 1 TABLES
 - 2 KEYS
 - 3 FIELDS
 - 4 DATABASE

3 STATISTICS

4 UTILITIES (see page 339)

Q QUERY

S SERVICE (see page 338)

Navigating the ISPF panels

Navigating from panel to panel

To call a panel, enter the corresponding number or letter in the option line and press ENTER.

To jump to a panel directly from the "Primary Selection Menu" skipping one or several intermediate panels, enter the numbers or letters separated by a period.

To call a panel directly from any other panel, enter an equal sign (=) followed by the numbers or letters separated by a period.

Example

To call the Beta System Profile Options in order to display or modify profiles, do one of the following:

- In the "Primary Selection Menu", type the letter **P** in the option line and press ENTER to display the "User Profile Selection Menu", then type **2** in the option line and press ENTER to call the "BETA System Profile Options".
- In the "Primary Selection Menu", type **P.2** in the option line and press ENTER. This will skip the "User Profile Selection Menu", and call the "Beta System Profile Options" directly.
- In any panel, type **=P.2** in the option line and press ENTER. This will call the "Beta System Profile Options" directly.

Note: The ISPF jump function is **not** available under VDF.

Display and entry fields

Display fields are marked by a colon (:).

Entry fields are marked by an arrow (===>).

Navigating within a panel

Use the arrow keys or mouse to move the cursor through the panel.

Use TAB or NEWLINE to jump directly to the entry fields of a panel.

Pressing TAB moves the cursor to the next entry field to the right or below.

Pressing SHIFT+TAB moves the cursor to the previous entry field.

Pressing NEWLINE moves the cursor downward to the next entry field.

NEWLINE always moves the cursor to the first entry field in a line.

Saving changes

To modify existing data or enter new data, type the data in the entry field or fields and press ENTER to save your changes.

To quit a panel without saving changes, press PF3.

Scrolling within tables

When tables contain more information than can be displayed on one screen, use the following commands or keys for scrolling:

Use command ...	or function key ...	to scroll ...
DOWN	PF8	downward
UP	PF7	upward
RIGHT	PF11	to the right
LEFT	PF10	to the left

Using blanks in fields

Do not use blanks within name fields, for example, **Form** and **Extension**. Trailing blanks are okay, though, if the name you have chosen is shorter than the maximum length of the field.

You can use any number of blanks within description fields, for example, **Title**.

Displaying line commands

Available line commands are displayed below the panel title in ISPF tables. Depending on the type of table, you can turn the display off by specifying **No** in the **Extended help** field in your profile (option **P.2**). Or you can use the primary commands **PROF HL OFF** and **PROF HL ON** to turn the display off or on during the current session.

Multi-selection

You can enter line commands in front of several rows in a table before pressing ENTER. The commands will be executed one after the other.

Block commands

Block commands apply to all entries of a table that are located between the two commands. For example, type **DD** at the beginning and at the end of a block in the List Selection table to mark all lists between the two commands for deletion.

When a line command comprises two characters, you must duplicate the first character to enter a block command. For example, type **UUD** at the beginning and at the end of a block if you want to remove the deletion mark from all lists located between the two commands.

Selecting, displaying, and updating definitions

Overview

This section describes the handling of the ISPF interface for the following tasks:

- Selecting, displaying and changing the existing definitions
- Inserting new definitions

Panel sequence

This sequence of the panels basically applies to the maintenance of the definitions with the help of the ISPF interface:

1. Selecting definitions

You can enter your selection criteria in the fields of a selection panel which is displayed after an option is called, to display the matching definitions.

2. Displaying definitions

The matching definitions are displayed in a table and can be processed with the help of appropriate line commands.

3. Updating a definition or inserting a definition

A definition can be inserted, or an existing definition can be modified with the help of this panel.

Selecting definitions

At first, a selection panel is displayed after the respective option in the selection menu is called. You can enter your selection criteria for the display of matching definitions in the fields of this panel.

Some fields support the entry of masks. Masks can contain the following characters:

- % (Percent sign) stands for any character
- * (Asterisk) stands for any character (including a zero string)

The matching definitions are selected from the database when you press ENTER.

Last changed: Date and User ID

With the help of the fields under **Last Changed** you can limit the selection to those data records, which were changed during the given period and/or by the specified user.

Valid entries in both date fields are:

- Date (any date format which is supported by Adabas Audit Data Retrieval)
- The keywords TODAY and YESTERDAY
- The week days

Valid entries in the **User ID** field are:

- A user ID or mask

If no matching definition is found

The following possibilities are available if no matching definition is found:

- The "Insert Definition" panel appears.
You can insert a new definition with the help of the displayed panel.
- The message "No data found" is displayed in the selection panel.
This messages appears instead of the "Insert Definition" panel if one of the following conditions is fulfilled:
 - You have entered a mask in at least one field of the selection panel.
 - You have entered a value in at least one of the fields which is not a data field key.

Even if the above mentioned conditions are fulfilled, some selection panels always jump to the "Insert Definition" panel.

Displaying definitions

The matching definitions will be displayed in a table (Display definitions) when you press ENTER in the selection panel.

You can update the displayed definitions or insert a new definition with the help of the line commands which are supported in the respective panels. The available line commands (or a selection of them) will be displayed in the respective panel, if you have switched-on the Extended Help Mode.

Inserting definitions

You can insert a new definition with the help of this panel. Select one of the following options to display this panel:

- Enter a new name in the data field keys of the selection panel.
- Enter one of the following line commands in front of a definition in the selection panel (Insert definitions):

I A panel with empty entry fields is displayed.

C A copy of the existing definition is displayed.

The values in the data field keys must be changed in order to save the definition under a new name.

Enter the desired values in the fields of the displayed panel and press ENTER in order to save the new definition. The new definition is displayed in the selection table (Display definitions). The message "Insert Successful" appears in the upper right-hand corner of the panel.

If you would like to exit the "Insert Definition" panel without saving the new definition, press PF3 instead.

Updating definitions

You can display or change an existing definition with the help of this panel. Enter the line command **S** in front of the desired definition in the selection table (Update definitions) in order to display this definition in the panel.

In order to change existing data, enter the desired data in the respective entry fields and press ENTER to save your entries.

Press PF3 in order to exit a panel without saving the changes.

The data field keys of an existing definition are displayed as Display fields (:), as the corresponding values can not be changed. You can only change data field keys of an existing definition by making a copy of this definition (Line command **C**).

Deleting definitions

In all tables that contain database definitions, entries can be deleted with the line command **D**, provided the definitions are not referenced elsewhere.

Using online help

Help panels (PF1)

The Adabas Audit Data Retrieval ISPF application includes help panels for each panel.

Press PF1 (HELP) in any Adabas Audit Data Retrieval panel to display the corresponding help panel.

Navigating help panels

To find information on the fields in a specific selection or definition panel, display this panel and press PF1.

To browse help panels in sequence, press ENTER to display the next help panel in the sequence or enter BACK (B) to display the previous help panel.

Long messages

Each short message of the Adabas Audit Data Retrieval ISPF application has a corresponding long message which provides additional information.

Short messages are displayed at the upper right corner of the panel. Press PF1 (HELP) to display the corresponding long message.

Example

In the following example, entering an illegal value has led to the display of the error message "Invalid date mask". Pressing PF1 displays the corresponding long message, which contains additional information if available. Pressing PF1 a second time displays the corresponding help panel.

```

PEB0PRF ----- Invalid date mask
Command ==>
MEXSF083 - Please enter one of the listed date masks.
Beta System Profile Options

System Name          ==> B97TEST.
System Location      ==> BERLIN.....
Subsystem ID         : B97T
System Level         : V7R2-nn      BSA Level      : nnnn-nn
System PTF Level     : xxxnnnn     BSA PTF Level : PBSnnnn

User Date Mask       ==> YY-MM-DD..  MM/DD/YY, DD.MM.YY, DD/MM/YY, YY.DDD
                                     MM/DD/YYYY, DD.MM.YYYY, DD/MM/YYYY
                                     YYYY.DDD, YYYY-MM-DD
BETA Product Language ==> E          (E)nglish,(G)erman
Extended Help Mode   ==> YES         (Y)es, (N)o

Press the ENTER key to update your system profile options.
Press the END key to return to the previous menu.

```

Printing tables (TPRINT)

- Introduction** You can print the currently displayed table using the primary command TPRINT.
- The print request is submitted by the current TSO user ID. The print parameters for this command are stored in your user profile.
- Note** This command works only for tables, but not for other panels.
- Changing the print characteristics** You can change the print characteristics for the TPRINT command permanently or temporarily when printing tables.
- Temporary changes apply only to the current TPRINT command. To make temporary changes, specify **No** in the **Save to PROFILE** field in the TPRINT Characteristics Default panel.
- Permanent changes apply to the current and subsequent TPRINT print command and are stored in your user profile. To make permanent changes, specify **Yes** in the **Save to PROFILE** field in the TPRINT Characteristics Default panel.
- Procedure** To print the current table:
1. Choose an option, enter the desired selection criteria, and press ENTER to display the table.
 2. In the command line, enter the primary command TPRINT.
 3. Type the values of your choice in the current panel and press ENTER.
- This will:
- Print the current table using the print characteristics of your choice
 - Save the print characteristics of your choice in your user profile if you have specified **Yes** in the **Save to PROFILE** field
 - Display the message "TPRINT successful" in the upper right corner of the panel

TPRINT Characteristics Defaults

```

PEB0TPRT -----
Command ==> _____

TPRINT Characteristics Defaults

Disposition ==> SHR          (S)HR, (O)LD, (M)OD, or blank to use SYSOUT
Dataset Name ==> BETA.TPRINT.TEST(MEMBER)_____

Class      ==> _           Hold      ==> YES
Forms Number ==> _____ Writer Name ==> _____
Destination ==> _____ User ID   ==> _____

Save to PROFILE ==> NO_   (Y)es, (N)o

Press the ENTER key to print the table.
Press the END key to return to the previous panel.
    
```

Fields

Field	Description
Disposition	To print to SYSOUT, leave this field blank. To print to an existing dataset, enter one of the following dispositions: SHR, OLD, or MOD To print to a new dataset, enter SHR, OLD, or MOD and enter the name of the new dataset in the Dataset Name field. After you have confirmed that you want to create a new dataset, a panel is displayed where you can specify the allocation parameters.
Dataset Name	Required if disposition is SHR, OLD, or MOD: Name of a PS dataset or of a member in a PO dataset. Attributes for this dataset must be: <ul style="list-style-type: none"> • RECFM=FB/FBA/FBM • LRECL = 80 - 143
Class	Required if disposition is blank: Output class to print to JES. Valid classes are A - Z and 0 - 9.
Hold	Required if disposition is blank: Yes to hold the SYSOUT dataset until it is released by the user
Forms Number	Identifies the forms on which the SYSOUT dataset is to be printed (optional); corresponds to the FORMS parameter
Writer Name	Identifies the member name of the External Writer Name (optional); corresponds to the WRITER parameter

Field	Description
Destination / User ID	Sends a SYSOUT dataset to the specified destination (optional); corresponds to the DEST parameter
Save to PROFILE	Yes to save the current values as print characteristic defaults in the user profile No to use the print characteristics for the current print request only without changing the defaults in the user profile

Browsing and searching (Options 1, I, and G)

In this chapter	Topic	Page
	List/Report Selection Panel (Option 1)	40
	List/Report Selection Panel via Indexes (Option I).....	46
	List/Report Selection Table	48
	Displaying list information.....	52
	Editing list generation record.....	54
	Manually marking lists for archiving.....	56

List/Report Selection Panel (Option 1)

Introduction	This section describes the fields in the List/Report Selection panel and illustrates how you can use these panels to select lists.
Navigation	<p>From the "Primary Selection Menu", choose:</p> <ul style="list-style-type: none">• Option 1 <p>The "Select Lists/Reports" panel is displayed, where you can enter your selection criteria. "Select Lists/Reports" has 2 pages.</p>
Required and optional fields	<p>You must specify time selection criteria. All the other fields are optional.</p> <p>To select lists by start and end date, leave the value field under Select from Last blank and specify a start and end date. Optionally, you can also specify a start and end time.</p> <p>To select the lists from the last <i>n</i> hours or days, enter a value <i>n</i> in the value field under Select from Last and specify Hours or Days in the following field.</p>
Using wildcards	<p>You can enter a name or a mask in the following fields: Form, Extension, Report, and Jobname.</p> <p>Valid wildcards are:</p> <ul style="list-style-type: none">• % (percent), which represents any single character• * (asterisk), which represents any sequence of characters (including a zero string)
Read-in date vs. list date	<p>The date displayed in Adabas Audit Data Retrieval can be one of the following:</p> <ul style="list-style-type: none">• The Adabas Audit Data Retrieval read-in date of the list• A date that has been set at read-in time• A date that has been extracted from the list (see "List definitions (Option 2.1)" on page 60)
Selecting matching lists	<p>Pressing ENTER on page 1 or page 2 of the List/Report Selection panel will start the selection of lists in the Adabas Audit Data Retrieval database.</p> <p>All matching lists will be displayed in the List/Report Selection table.</p>

List/Report Selection panel (Page 1)

```

PE97BR00 ----- Page 1 of 2
Command ==> _____

Select Lists/Reports

Select from Last      ==> 2. Hours      01-99, (H)ours, (D)ays
                        or blank to define Start/End
Start Date (MM/DD/YYYY) ==> 03/09/2009  Start Time ==> _____
End Date (MM/DD/YYYY)  ==> TODAY_____ End Time ==> _____

Optional Selection Criteria:

Form      ==> REJ_____ String in Title ==> *_____
Extension ==> *_____ from Column ==> 0_ (0 - 80)
Report    ==> *_____
Jobname   ==> *_____ Browser Notes ==> ___ (Y)es, (N)o or
Folder    ==> *_____ blank

Press ENTER to display the lists/reports. Press DOWN to display the next page.
Press END to return to the previous menu.
    
```

Fields (Page 1)

Field	Description
Select from Last	Enter a value <i>n</i> between 1 and 99 and specify Hours or Days to select lists of the last <i>n</i> hours or <i>n</i> days Or leave the value field blank to select lists by the start/end date and start/end time specified in the following fields
Start Date/ End Date	Enter any of the following in these fields to select lists between this start and end date: <ul style="list-style-type: none"> • A date using the displayed date mask • A day of the week (MONDAY through SUNDAY) • The keywords TODAY or YESTERDAY Note: The value field under Select from Last must be blank to select lists using the specified start and end date.
Start Time/ End Time	Enter a start and end time in the format <i>hh:mm</i> Start and end time are based on the 24-hour clock. The default start time is 00:00 and the default end time is 23:59 (which corresponds to 11:59 P.M.).
Form/ Extension/ Report	To select lists by name, enter a name or mask in one or more of these fields
Jobname	To select lists by the job that created the list (creating jobname), enter a name or a mask
Folder	To select lists by the folder that the list has been assigned to, enter a name or a mask. Note: Whether it is possible to enter a mask in this field is determined by your system administrator.

Field	Description
String in Title from Column	To select lists via the title, enter a string (max. 16 characters) that must be contained in the title. Optionally you can enter a column number to start the search at the specified column. from Column=0 means that the complete title is searched. Note on wildcards: You can use the mask characters % or ? to denote any single character within the search string. An * (asterisk) is interpreted as the end of the search string. Characters following the asterisk are not evaluated.
Browser Notes	Enter one of the following: Yes to select only lists with browser notes (only public notes and your own private notes will be taken into account) No to select only lists without browser notes <i>blank</i> to ignore browser notes during the selection

List/Report Selection panel (Page 2)

```

PE97BR01 ----- Page 2 of 2
Command ==> _____

Select Lists/Reports

Optional Selection Criteria:

Layout          ==> LIST__   (J)ob,(L)ist,(S)tatus,(U)ser
Display with Title ==> NO_     (Y)es,(N)o
Select by Type   ==> ALL__   (L)ist,(R)eport,(A)ll
Select by Online ==> ___     (Y)es,(N)o
Select by Archive ==> ___     (Y)es,(N)o,archive (P)ending
Marked for Viewable ==> YES    (Y)es,(N)o,(A)ll
Marked for Reload ==> ___     (Y)es,(N)o
Marked for Delete ==> ___     (Y)es,(N)o
Sort Order       ==> DESCENDING (A)scending,(D)escending
By Primary Key   ==> DATE_____ (D)ate and Time, (J)obname,
Secondary Key    ==> JOBNAME__ (F)orm,(E)xtension,(R)eport,(T)itle
Execute the Macro ==> NO_     (Y)es,(N)o

Press ENTER to display the lists/reports. Press UP to display the previous
page. Press END to return to the previous menu.
    
```

Fields (Page 2)

Field	Description
Layout	<p>Here you can enter the layout type for the "List/Report Selection Table":</p> <ul style="list-style-type: none"> • User The user defined layout is used for the "List/Report Selection Table" display when you select User. In case the message MEPMI242 - User Layout not defined appears, you have not yet defined a layout (see "Customizing the List/Report Selection Table layout (Option P.5)" on page 184). • other values Whether the options Job, List or Status cause the display of the layout of the same name depends on the configuration of your system (see "Layouts for the List/Report Selection table" on page 195).
Display with Title	This is not a selection criterion. Enter Yes to use a two-line display for each list in the List/Report Selection table, which includes the list title.
Select by Type	<p>Valid entries are:</p> <p>List limits the selection to lists</p> <p>Report limits the selection to reports</p> <p>All lists as well as reports are selected</p>
Select by Online	<p>Enter one of the following:</p> <p>Yes to select online lists only</p> <p>No to select offline lists only</p> <p><i>blank</i> to select both online and offline lists</p>
Select by Archive	<p>Enter one of the following:</p> <p>Yes to select only lists that have been archived</p> <p>No to select only lists that are not archived</p> <p>Pend to select only lists marked for archiving</p> <p><i>blank</i> to ignore archive status during the selection</p>
Marked for Viewable	<p>Enter one of the following:</p> <p>Yes or <i>blank</i> to select only lists that are viewable</p> <p>No to select only lists that have been marked 'not viewable'</p> <p>All to select lists that are viewable (View = Yes) and lists that are 'not viewable' (View = No)</p>

Field	Description
Marked for Reload	Enter one of the following: Yes to select only lists that have been marked for reloading No to select only lists that have not been marked for reloading <i>blank</i> to ignore this criterion during the selection
Marked for Delete	Enter one of the following: Yes to select only lists that have been marked for deleting No to select only lists that have not been marked for deleting <i>blank</i> to ignore this criterion during the selection
Sort Order/ By Primary Key/ Secondary Key	This is not a selection criterion. By default, lists are sorted by date/time in descending order, that is, the most recent lists are displayed at the top of the table. You can change the sort order from descending to ascending or you can change the sort criteria by specifying one of the following under primary and secondary key: <ul style="list-style-type: none"> • (D)ate and Time • (J)obname • (F)orm • (E)xtension • (R)eport • (T)itle
Execute the macro	Enter one of the following: No No views/macros are executed Yes When displaying hit pages or the entire list, Adabas Audit Data Retrieval checks whether there are views/macros for this list and this user. The Beta Browser reacts as follows if Yes : <ul style="list-style-type: none"> • If no view/macro exists, the first (hit) page is displayed. • If one view/macro exists, the list or hit pages are displayed in the Browser and the commands contained in the view are executed. • If several views/macros exist, the views/macros are displayed in a table for selection.

Note on generic folder selection

The following LST parameter determines whether it is possible to enter a mask in the **Folder** field:

- B97_FOLDER_SELECTION_GENERIC

Note on Autoselection

If the **Autoselect** field in the user profile (option **P.3**) or in the user definition (option **C.1**) contains **Yes**, choosing option **1** (BROWSE) will **not** display the List/Report Selection panel and choosing option **I** (INDEX) will **not** display the List/Report Selection via Indexes panel. Instead, it will carry out the selection automatically and display the List/Report Selection table.

For more information on Autoselection, see "Jobcard and auto-selection (Option P.3)" on page 179 and "User profiles defined by the administrator" on page 187.

For information on how Adabas Audit Data Retrieval must be called in order to process the user profiles defined under option **C.1**, see the corresponding section in the *Adabas Audit Data Retrieval Installation and System Guide*.

List/Report Selection Panel via Indexes (Option I)

Introduction This section describes the fields in the List/Report Selection via Indexes panel.

Navigation Option I (INDEX)
From the "Primary Selection Menu", choose:

- Option I
The "Select Lists/Reports via Indexes" panel is displayed, where you can enter your selection criteria. "Select Lists/Reports via Indexes" has 2 pages. Page 2 is identical under option 1 (BROWSE) and option I (INDEX).

List/Report Selection via Indexes panel (Page 1)

```

PE97BR0I ----- Page 1 of 2
Command ==> _____

Select Lists/Reports via Indexes

Select from Last      ==> 99 Hours__  01-99, (H)ours, (D)ays
                        or blank to define Start/End
Start Date (MM/DD/YYYY) ==> .....  Start Time ==> _____
End Date (MM/DD/YYYY)  ==> _____ End Time ==> _____

Optional Selection Criteria:

Index 1 ==> STOCK_____ Form      ==> REJ _____
Index 2 ==> ARTICLE_____ Extension ==> * _____
Index 3 ==> _____ Report     ==> * _____
Index 4 ==> _____ Jobname    ==> * _____
Index 5 ==> _____ Folder     ==> * _____

Press ENTER to display the lists/reports. Press DOWN to display the next page.
Press END to return to the previous menu.
    
```

Fields

Field	Description
Index <i>n</i>	Index name
(all other fields)	See the field descriptions of the Browse Select panel in "List/Report Selection Panel (Option 1)" on page 40.

Selecting indexes

If you don't know the exact name of an index, you can also enter masks in the fields **Index 1** through **Index 5** and then select the desired indexes from the displayed table.

To select indexes from a table:

1. In the Select Lists/Reports via Indexes panel, enter up to five different masks in the fields **Index 1** through **Index 5** respectively. Specify other selection criteria in this panel as desired.

This will display a table containing all matching indexes.

2. Type line command **S** in front of up to 5 indexes, then press ENTER and then PF3.

This will populate the fields **Index 1** through **Index 5** with these index names.

3. Press ENTER to submit the query.

Note on Autoselection

If the **Autoselect** field in the user profile (option **P.3**) or in the user definition (option **C.1**) contains **Yes**, choosing option **1** (BROWSE) will **not** display the List/Report Selection panel and choosing option **I** (INDEX) will **not** display the List/Report Selection via Indexes panel. Instead, it will carry out the selection automatically and display the List/Report Selection table.

For more information on Autoselection, see "Jobcard and auto-selection (Option P.3)" on page 179 and "User profiles defined by the administrator" on page 187.

For information on how Adabas Audit Data Retrieval must be called in order to process the user profiles defined under option **C.1**, see the corresponding section in the *Adabas Audit Data Retrieval Installation and System Guide*.

List/Report Selection Table

Overview This section contains a complete description of the List/Report Selection table.

Navigation The "List/Report Selection Table" is displayed when you press ENTER in the panel "List/Report Selection" (Option 1) or "List/Report Selection via Indexes" (Option I).

List/Report Selection Table

```

PE97BR05 ----- Row          1 of      4
Command ==> _____ Scroll ==> PAGE

List/Report Selection Table          Layout: LIST          Select by: ALL

S - Browse  IN - Information  IX - List Index  P - Print  R - Reload
Enter / to select more line commands

Sel  Date      Time  Form      Extension      Report      Status  Note
2020-10-02 09:08 FNR101  QASF101        FILE101      ONLINE  NO
2020-10-02 09:08 TC#EMPTY EXT#EMPTY
2020-10-02 08:59 FNR101  QASF101        FILE101      ONLINE  NO
2020-10-02 08:59 TC#EMPTY EXT#EMPTY      ONLINE  NO
***** BOTTOM OF DATA *****
    
```

Fields

Field	Description
Date/ Time	Adabas Audit Data Retrieval read-in date and time Note: Instead of the actual read-in date, the date can also be a date that was set at read-in time or a date extracted from the list (see "List definitions (Option 2.1)" on page 60).
Form/ Extension/ Report	The Adabas Audit Data Retrieval form, extension, and report name The report name is blank if the entry refers to a list.
Status	Online/Offline status
Note	Browser notes Yes One or more browser notes have been created for this list. No No browser note has been created for this list.

Field	Description
Arch	Archive status Yes The list and its indexes have been archived. Pend The list has been marked for archiving, but the list and its indexes have not been archived yet. No The list will not be archived.
MDel	Pend The list has been marked for deletion. It will be deleted at the next run of the batch utility B97DEONL.
V(iewable)	Status viewable/not viewable N The list has been marked 'not viewable' using the line command NV or UV . Lists that have been marked 'not viewable' cannot be browsed, searched, or printed. Y The list is viewable.
Jobname/ Stepname/ Procstep/ Job ID	Information on the B97RDR00 reader job
DD-Name	DD name used for the ALOG dataset
Pages	Total number of pages

List of line commands

The following line commands are available in the List/Report Selection table.

- S** Not used in Adabas Audit Data Retrieval
- B**
- IX** Displays the query panel to search the list index
- IN** Displays detailed list information
- I**
- P** Not used in Adabas Audit Data Retrieval
- M** Not used in Adabas Audit Data Retrieval
- A** Displays a panel where you enter the archive medium, archive retention period, and owner, and then marks the list for archiving (status 'Arch = Pend')
The list will be archived at the next run of the archive batch utility.
- UA** Removes the archive flag to prevent the list from being archived (available only while status 'Arch = Pend')

-
- AG** Calls the Archive Datasets table which displays the archive (generation) dataset where the list and its indexes have been archived
- D** Sets a flag to mark a list for deletion
- The list will no longer be available online after the next run of the online cleanup batch utility. If the list has not been archived before this run of the online cleanup batch utility (status 'Arch = Pend' or 'Arch = No'), the list will be removed completely from Adabas Audit Data Retrieval.
- UD** Removes the deletion flag
- R** Marks a list that is no longer available online for reloading.
- The list will be reloaded into the Adabas Audit Data Retrieval spool at the next run of the reload batch utility.
- UR** Removes the reload flag to prevent the list from being reloaded
- NV** Sets a flag to mark the list as 'not viewable'
- UV** Lists marked 'not viewable' cannot be searched.
- V** Removes the 'not viewable' flag
- H** Hides the list from the List/Report Selection table
- E** Edits the generation record of the list (see "Editing list generation record" on page 54)
- IR** Displays the indexes that have been created for this list
- IF** Displays in which spool files the list and its indexes are stored (see "Spool files" on page 329)

Sorting entries in columns

You can sort the entries in some columns in ascending or descending order.

To sort the table in ascending order, enter the following on the command line:

```
SORT column, A
```

where *column* can be one of the following:

- Date
- Time
- Form
- Ext
- Status
- Note

To sort the table in descending order, enter the following on the command line:

```
SORT column, D
```

Example

To display all lists with browser notes at the top of the table, enter:

```
SORT NOTE, D
```

Note

Enter **SORT** or **SORT ?** to display all possible sort fields.

Locating entries in columns

You can locate an entry in the first column sorted. Enter the following command into the command line:

```
LOCATE entryname
```

Example

To locate the list with the extension TRADE, enter the following:

```
SORT EXT, D  
LOCATE TRADE
```

Note on Adabas Audit Data Retrieval read-in date/time

The read-in date and time stored in the Adabas Audit Data Retrieval list generation record is by default the actual Adabas Audit Data Retrieval read-in time.

Specifying &ADADATE in the **Format** field of the list/report definition causes Adabas Audit Data Retrieval to store the list under a date/time extracted from the ALOG dataset. The date/time of the first transaction in the ALOG dataset is taken as the date/time of the list.

It is also possible to change the date in the Adabas Audit Data Retrieval list generation record after the list has been read in (see "Editing list generation record" on page 54).

Displaying list information

Procedure

To display information on a list:

- In the List/Report Selection table, enter line command **IN** (or **I**) in front of the list.

This will display the first page of the "List Generation Record" panel.

List Generation Record panel (Page 1)

```

PE97BR20 ----- Page 1 of 3
Command ==> _____

List Generation Record

Form       : ARCH           Jobname  : QI3635E       Date   : 2020-09-25
Extension  : TAPE101       JobID   : J0013252      Time   : 06:01:49:07
Report    :                               Owner    : QDOC

LIST ARCHIVED WITH V71 NEW FOR 101 DAYS

Source Information
Obtained from : SUBSYS      Job Stepname: STEP62   Record Format: VBM
SMF ID       : BETA        Proc Stepname:         Control Char.: YES
Sysout Class :             DD Name   : SYSUT2       TRC Chars   : NO
Destination  :             Lines    : 33           AFP Records  : NO
Submit User  : TWSZ        Pages     : 3           AFP Page Mode: NO
Submit Time  : 06:00:01
Submit Date  : 2020-09-25 Data in ASCII: NO       Insert TRC   : NO
File Extension:
Member Name  :
Dataset Name : SUBSYS.DATASET.STH
Copies      : 1

Press DOWN to display the next page or END to return to the previous panel.

```

List Generation Record panel (Page 2)

```
PE97BR21 ----- Page 2 of 3
Command ==> _____

List Generation Record

Form       : ARCH           Jobname  : QI3635E       Date   : 2020-09-25
Extension  : TAPE101       JobID   : J0013252     Time   : 06:01:49:07
Report    :                   Owner   : QDOC

LIST ARCHIVED WITH V71 NEW FOR 101 DAYS

Status Information
Online Expiration Date: 2020-09-26 Retention: 1 Days Expired: NO
Index Expiration Date: 2020-09-26 Retention: 1 Days Delete :
Archive Expiration Date: 2021-01-04 Retention: 101 Days Archive: YES
New Arc Expiration Date:
Archive Medium : TAPE OnlExpdt = ArcExpdt: NO
Extended Status Information
Document Stack : NO
Browser Notes : NO Item Process Mode : NO
Layout Name : Item Display Mode : NO

Press UP to display the previous page or END to return to the previous panel.
For internal use only: Press DOWN for the page with debug information.
```

Fields

The fields displayed in these panels are self-explanatory.

Editing list generation record

Overview

A new list generation record is created each time when a list generation is read in.

Some of the information stored in the list generation record can be changed after the list has been read in.

Navigation

To edit a list generation record:

- In the List/Report Selection table, enter line command **E** in front of the list.

This will display the "Update List Generation Record" panel, where you can enter your changes.

What can be changed?

The following data in the list generation record can be changed:

- Title of the list
- Adabas Audit Data Retrieval list date
- Online retention period of the list and its indexes

Requirement: The list and its indexes must be online.

- Item display mode

Requirement: The list has been read in and processed in item mode.

- User-defined query mask (layout) that is to be used for this list
- Archive medium and archive retention period

Requirement: The list and its indexes have not yet been archived.

- Archive expiration date

Requirement: The list and its indexes have already been archived.

Important: Specifying a new archive expiration date just marks the list for a change of archive expiration date. The following is necessary for this change to be effective:

- The batch utility B97AXPDT, which updates the information in the Adabas Audit Data Retrieval database and writes a report on the archive media and archive datasets affected by this change, must run.
- The expiration date of the archive media and archive datasets affected must be changed in the corresponding management system (TMS, SMS, HSM), if applicable.

Update List Generation Record

```

PE97IG97 -----
Command ==> _____

Update List Generation Record      Last Update:                00:00:00

Form      : HANDEL                Jobname  : QI#3977E           Date   : 03/17/2009
Extension : RECHNUNGEN           JobID    : J0064929          Time   : 09:34:08:66
Report    :
List Title      ==> LIST ARCHIVED WITH V42 NEW FOR 100 DAYS_____

List Date      ==> 03/17/2009 ( MM/DD/YYYY ) Dtoken: 3C1A272769BFFFFF
OnlExpdt = ArcExpdt ==> NO      (Y)es,(N)o
Online Retpd   ==> 3          (1 - 36500) Days ( 03/20/2009 )
Index Retpd    ==> 3          (1 - 36500) Days ( 03/20/2009 )
New Arc Expdt  ==> _____ ( 06/25/2009 ) Retpd : 100
                                           Medium: TAPE
                                           Owner  : QDOC

Item Display Mode : NO      (Y)es,(N)o  Item Processing Mode: NO
Layout           ==> _____ (Name or mask)

Press the ENTER key to update the list generation record.
Press the END key to return to the previous panel.
    
```

Note on input fields

Which fields are displayed and which fields are input fields depends on the status of the list.

Fields

Field	Description
List date	Date under which the list is displayed in the List/Report Selection table
<i>(all other fields)</i>	See the field descriptions of the list definition in "List definitions (Option 2.1)" on page 60.

Manually marking lists for archiving

Overview

When reading in a list, Adabas Audit Data Retrieval creates a list generation record for this list.

Among other things, this record contains information that is used by the archive batch utility when archiving this list. Some of these values may be modified after the list has been read in:

- Via the line command **E** (see page 54)
- Via the line commands **A** and **UA**

Line commands **A** and **UA**

You can modify the following if a list has not been marked for archiving (status "Arch = No"):

- You can mark the list for archiving using the line command **A**.

This will display a panel where you can specify the archive medium, archive retention period, and owner.

Prerequisite: The list has not been archived and it has not been marked for archiving (Status "Arch = No")

You can modify the following if a list has been marked for archiving (status "Arch = Pend"):

- You can remove this mark using the line command **UA**. In this case, the list will not be archived.

Prerequisite: The list has been marked for archiving, but has not yet been archived (Status "Arch = Pend").

Note

If you want to modify the archive medium, archive retention period, or owner of a list that has been marked for archiving, enter the line command **UA** first and afterwards enter the line command **A**. You can then specify these values in the displayed panel.

Alternatively, you can also carry out these modifications using the line command **E**. With the help of the line command **E** and the batch utility B97AXPDT, it is also possible to change the archive expiration date of lists that have already been archived.

Update List Generation Record

```

PE97IG99 -----
Command ==>

Update List Generation Record      Last Update:                00:00:00

Form      : REJ                    Jobname  : REJIMPRT           Date   : 03/17/2009
Extension : TRADE                  JobID    : *IMPORT*           Time   : 13:08:37:41
Report    :
MY SHORT TRADE LIST

The archive information for the above list/report are incomplete or might
be modified. Please enter the required values below:

Archive Medium      ==>                (T)ape,(D)isk,(O)disk,(C)entera
Archive Retention Period ==> 0         (1-36500) Days

Owner               ==> CUST001

Press the ENTER key to update the list generation record.
Press the END key to return to the previous panel.
    
```

Fields

Field	Description
Archive Medium	Adabas Audit Data Retrieval supports the following media: <ul style="list-style-type: none"> • Tape • Disk • Optical disk • Centera
Archive Retention Period	Number of days the list and its indexes should remain available in the archive (minimum)
Owner	When assigning a list to an archive pool, the owner of the archive pool definition must be the same as the owner specified in this field.

For more information on how this information is processed, see "Archiving concept" on page 121.

Definitions relating to lists and indexes (Option 2)

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Definitions Selection Menu (Option 2)

Overview

This chapter describes the definitions that are used by Adabas Audit Data Retrieval in connection with the indexing of lists. The "Definitions Selection Menu" provides access to the corresponding definition panels.

Definitions Selection Menu

```

PE97DEF0 -----
Option ==>> _____

Definitions Selection Menu                                System - PROD
                                                         Location - BERLIN
                                                         Subsys-ID - B97P
                                                         User ID - B97USER

  1 LIST          - Display or Update List and Report Definitions
  2 SEARCH        - Display or Update Search Argument Definitions
  3 INDEX          - Display or Update Index Descriptions

  4 FOLDER        - Display or Update Folder Definitions
  5 GROUP         - Display or Update Folder Group Definitions

  6 LAYOUT        - Display or Update Layout for Index Retrieval

Select one of the above options. Press END to return to the previous menu.

```

Note

You can find an overview of the required Adabas Audit Data Retrieval definitions in "Required definitions in Adabas Audit Data Retrieval" on page 21.

List definitions (Option 2.1)

Overview List definitions control the processing lists and reports in Adabas Audit Data Retrieval.

Navigation From the "Primary Selection Menu" choose:

- Option 2.1

The "Select List/Report Definitions" panel is displayed, where you can specify your selection criteria.

List/Report Definition panel (Page 1)

```

PE97LD10 ----- Page 1 of 3
Command ==> _____

Insert List/Report Definition

Form      ==> FNR100..
Extension ==> QASF100_____
Report    ==> _____

Owner     ==> QAB97___
Sec-Level ==> _____
Title     ==> TESTDATEI (ADABAS.FS1.$TMP.CLOG001)_____

To extract a list date from the list data, specify the following values:
Line      ==> 0000   Column ==> 00000   Format ==> &ADADATE__
Number of Lines ==> 0001

Press ENTER to insert the definition. Press DOWN to display the next page.
Press END to return to the previous panel.
    
```

Fields (Page 1)

Field	Description
Form, Extension Report	Each list is defined by form (max. 8 characters). Optionally, it can also have an extension (max. 16 characters) and a report name (max. 16 characters).
Owner	The owner is used in security and archiving. Security: The owner is passed to the security exit and can be used for defining security profiles (optional; max. 8 characters). Archiving: In order for a list to be assigned to an archive pool, the owner of the list must be identical to the owner of the pool definition.
SecLevel	The security level is passed to the security exit and can therefore be used for defining security profiles (optional; max. 8 characters).
Title	Descriptive title which can be used to describe and identify lists (optional; max. 60 characters; may include blanks)

Field	Description
Line, Column, Format, Number of Lines	<p>By default, the generation record of each list includes the date and time when the list was read in by Adabas Audit Data Retrieval.</p> <p>Specify the variable &ADADATE in the Format field if the date/time of the list is to be set to the date/time of the first transaction contained in the list. The calculation of the online retention will then be based on the date extracted from the list.</p> <p>The other fields are typically not used by Adabas Audit Data Retrieval.</p>

List/Report Definition panel (Page 2)

```

PE97LD11 ----- Page 2 of 3
Command ==> _____

Insert List/Report Definition

Form: FNR100      Extension: QASF100      Report:

Archive Processing Parameters :

Automatic Archive      ==> NO_      (Y)es,(N)o
Archive Medium        ==> _____ (T)ape,(D)isk,(O)disk,(C)en-
Archive Retention Period ==> 00000      (1-36500) Days      tera

Online Processing Parameters :

Online = Archive Expiration Date ==> NO.      (Y)es,(N)o

Online Retention Period ==> 00001      (1-36500) Days
Index Retention Period  ==> 00001      (1-36500) Days

Press ENTER to insert the definition. Press DOWN to display the next page, or
UP to display the previous page. Press END to return to the previous panel.
    
```

Fields (Page 2)

Field	Description
Automatic archive	Yes to automatically mark the generations of this list for archiving when they are read in by Adabas Audit Data Retrieval
Archive medium	<p>Defines the archive medium for the list</p> <p>Adabas Audit Data Retrieval supports the following media:</p> <ul style="list-style-type: none"> • Tape • Disk • Optical Disk • Centera <p>The archive medium and the archive retention period determine the selection of the archive pool. The list will be archived to all subpools that have been defined for the matching archive pool. For more information on archiving, see "Archiving concept" on page 121.</p>

Field	Description
Archive Retention Period	Number of days the list and its indexes should be available in the archive (minimum)
Online = Archive Expiration Date	<p>Yes Online and archive expiration date are identical. The lists and their indexes remain available online until their archive expiration date is reached.</p> <p>No The online availability of the list and its indexes results from the entries in the Online/Index Retention Period fields.</p>
Online Retention Period	Number of days the list should be available online in the Adabas Audit Data Retrieval spool
Index Retention Period	Number of days the indexes should be available online; the index retention period must be greater than or equal to the value in the Online Retention Period field

List/Report Definition panel (Page 3)

```

PE97LD12 ----- Page 3 of 3
Command ==> _____

Insert List/Report Definition

Form: FNR100      Extension: QASF100      Report:

Read-In and Display Processing Parameters :

Copy to Local Spool      ==> NO_          (Y)es,(N)o
Document Stack           ==> NO_          (Y)es,(N)o
Indexing without Definition ==> YES      (Y)es,(N)o

Item Processing Mode      ==> YES          (Y)es,(N)o
Item Display Mode        ==> YES          (Y)es,(N)o

Layout                   ==> _____ (Name or Mask)

Press ENTER to insert the definition. Press UP to display the previous page.
Press END to return to the previous panel.
    
```

Fields (Page 3)

Field	Description
Copy to Local Spool	Not used by Adabas Audit Data Retrieval (Lists are always copied to the local spool irrespective of the value of this field.)
Document Stack	Not used by Adabas Audit Data Retrieval

Field	Description
Indexing without Definition	<p>Yes The index is created on the basis of the structure information (GFFTs) contained in the list.</p> <p>In addition, index definitions can also be created for the list (optional), which are then also taken into consideration when an index is created.</p> <p>No The index is created solely on the basis of the index definitions.</p>
Item Processing Mode Item Display Mode	<p>All ALOG datasets are processed as item lists.</p> <p>Both fields must be set to Yes.</p>
Layout	<p>The query mask defined under this layout name is to be used for index-based queries for this list.</p> <p>If no name is specified, the query mask is generated dynamically.</p>

Index definitions for lists

Overview

Adabas Audit Data Retrieval creates indexes automatically on the basis of the structure information (GFFTs) contained in the audit dataset if **Indexing without Definition** is set to **Yes** in the corresponding list definition.

You can use index definitions to create additional indexes or to modify the indexes that are created automatically. Created indexes will be merged if they have the same name.

Navigation

To navigate to the index definitions of a list:

1. From the Primary Selection Menu, choose option **2.1**.
2. Type selection criteria in the displayed panel and press ENTER.
3. Enter line command **IX** in front of the list.

Index Definitions table

```

PE97ID05 ----- Row      1 of      5
Command ==> _____ Scroll ==> PAGE

Display Index Definitions                               Page 1 of 4
                                                         ( LEFT/RIGHT )
Form: REJ      Extension: TRADE      Report:
S - Select     I - Insert      C - Copy      D - Delete

Sel  Index Name      Ins Scan Argument      A L ValidFrDat ValidToDat
ACCOUNT      000 ACCOUNT          + 1 01/28/2008 12/31/9999
ARTICLE      000 P'999S999S9'    + 1 01/28/2008 12/31/9999
ARTICLE#     000 P'999S999S9'    + 1 01/28/2008 12/31/9999
CUSTOMER     000 P'999S999S999SU'  + 0 01/28/2008 12/31/9999
ORDER       000 P'999999'          + 0 01/28/2008 12/31/9999
***** BOTTOM OF DATA *****
    
```

Note

A plus sign (+) in the **A** column indicates that an index definition is active and a minus sign (-) indicates that it is inactive. Whether a definition is active or inactive is determined by the specified from/to date in the definition.

The value in the **L** column indicates the level of the index (0 = global, 1 = primary, 2 = secondary).

**Index Definition panel
(Page 1)**

```

PE97ID10 ----- Page 1 of 4
Command ==> _____

Form : REJ           Extension : TRADE           Report :
Owner: CUST001

Index Name  ==> CUSTOMER..... Format ==> STRING..... (D)ecimal,TOD-
Instance No. ==> 000 (0-999)           (B)in,TOD-he(X),
Index Level ==> 1           (0-2)           (S)tring

Scan Argument ==> P'9999S9999S999SU'.....

Extract String Relative to Scan Argument:
Column      ==> +0.... Length      ==> 15           (1-42/34)

Scan List/Report for Scan Argument:
From Row    ==> 0_____ From Page  ==> +1_____ Value,(L)ast
To Row      ==> 0_____ To Page    ==> LAST_____ Value,(L)ast
From Column ==> 59_____ From Date ==> 02/18/2008 (MM/DD/YYYY)
To Column   ==> 59_____ To Date   ==> 12/31/9999 (MM/DD/YYYY)

Press ENTER to insert the definition. Press DOWN to display the next page.
Press END to return to the previous panel.
    
```

Fields (Page 1)

Field	Description
Index Name	<p>Max. 16 characters, identifier of index</p> <p>Note: If you need several index definitions for one index (for example, because the values to be indexed are located next to different identifiers), use the same index name with different instance numbers. The combination of index name and instance number must be unique.</p>
Instance No.	<p>Allowed values: 0..999</p> <p>Use the instance number to:</p> <ul style="list-style-type: none"> • Make the combination of index name and instance number unique if you must define several index definitions under the same index name • Determine the order in which index fields are displayed on the query panel (display order from lowest instance number to highest instance number)
Index Level	<p>Determines the index type</p> <p>Allowed values:</p> <p>0 Global index</p> <p>1 Primary index</p> <p>2 Secondary index</p> <p>For more information, see "Index types" on page 24.</p>

Field	Description
Format	<p>Permissible values are:</p> <ul style="list-style-type: none"> • String (default) • Decimal <p>Specify Decimal in this field if you want to index numeric values. Decimal indexes do not support search according to masks. Normally the value Yes is entered in the Enable Range Selection field for decimal indexes. You can specify the decimal character and the number of decimal positions on page 3 of the panel.</p> <ul style="list-style-type: none"> • TOD-Bin (time-of-day token binary) <p>Token with date/time value in STCK format in binary presentation (16 digits)</p> <ul style="list-style-type: none"> • TOD-Hex (time-of-day token hexadecimal) <p>Token with date/time value in STCK format in hexadecimal presentation (16 digits)</p>
Scan Argument	<p>The scan argument may be one of the following:</p> <ul style="list-style-type: none"> • A GFFT identifier, which identifies the indexed field via the global format ID (GFID) and the two-digit field ID (FID) <p>A GFFT identifier has the following syntax: GFFT:<i>gfid-fid</i></p> <p>Example: GFFT:CLIENT-UF</p> <ul style="list-style-type: none"> • A string or pattern, which finds the information to be indexed by scanning the contents of the list <p>The string or pattern can represent the indexed value directly or an identifier that helps locate the indexed value on the page. Define one of the following or a combination thereof:</p> <ul style="list-style-type: none"> • <i>'string'</i> or <i>string</i> • <i>P'picture'</i> • <i>X'hex_string'</i> <p>Scan arguments are case sensitive, which means that Adabas Audit Data Retrieval distinguishes between uppercase and lowercase letters.</p> <p>For more information on defining scan arguments, see "Picture strings for scan arguments" on page 72.</p>

Field	Description
Extract String Relative to Scan Argument: Column Length	<p>If scan argument is a GFFT identifier: Only the Length field is honored. Adabas Audit Data Retrieval uses the actual length of the field if the specified value is greater than the field length.</p> <p>If scan argument is a string or pattern: Each time the scan argument is found on the page, a value is extracted at the specified location relative to the scan argument. The maximum length of indexed values is 42 bytes.</p> <p>If the scan argument is the value that is to be extracted for the index, enter:</p> <ul style="list-style-type: none"> • 0 (zero) in the Column field • The length of the scan argument in the Length field <p>If the scan argument is merely used to locate the value that is to be extracted for the index, enter:</p> <ul style="list-style-type: none"> • The number of columns to the left (negative value) or to the right (positive value) from the first character of the scan argument in the Column field • The length of the string to be indexed in the Length field
Scan List/Report for Scan Argument: From Column To Column From Row To Row	<p>If scan argument is a string or pattern: You can use these fields to define a window on the page where the scan argument should be searched. Enter 0 (zero) in all four fields to search the entire page.</p> <p>Important: When you define a window on the page, the first character of the scan argument must be within the window defined by the values in the From/To Column and the From/To Row fields, not the entire scan argument. If you know the exact location of the searched string, specify the same value in the From Column and the To Column field.</p>
Scan List/Report for Scan Argument: From Page To Page	<p>If scan argument is a string or pattern: Enter a numeric value or Last to search the scan argument on certain pages only. Enter 1 in the From Page field and Last in the To Page field to search the entire list.</p>

Field	Description
Scan List/Report for Scan Argument: From Date To Date	Enter a date if the definition is valid only during the specified period. Note: We strongly recommend using four-digit year date masks. If you use a two-digit year date mask, 00 through 33 will be read as 2000 through 2033 and 34 through 99 will be read as 1934 through 1999.

Index Definition panel (Page 2)

```

PE97ID11 ----- Page 2 of 4
Command ==> _____

Form : REJ          Extension : TRADE          Report :
Owner: CUST001      Index    : CUSTOMER         Format  : STRING
                                           Instance: 000

Scanning of Overlaid Lines:
Line Number          ==> ANY__          Line Number,(L)ast,(M)erge,(A)ny

Processing Attributes:
Occurrence           ==> ANY__          (F)irst,(L)ast,(A)ny
Warning Level        ==> WARNING        (W)arning,(E)rror,(I)gnore

Execution Attributes:
Input Required       ==> NO_           (Y)es,(N)o
Enable Range Selection ==> NO_         (Y)es,(N)o

Press ENTER to insert the definition. Press DOWN to display the next page, or
UP to display the previous page. Press END to return to the previous panel.
    
```

Fields (Page 2)

Field	Description
Line Number	<p>If the list includes overlaid lines, define:</p> <ul style="list-style-type: none"> • Any to search all lines • Merge to search the merged line <p>When lines are merged, the merged line contains the first non-blank character (if available) at each column position, for example:</p> <pre> Line 1: aaa aaa aaa aaa Line 2: bbbbb bbbbb bbbbb Merged line: aaabaaabaaa aaabb </pre> <ul style="list-style-type: none"> • Last to search the last line only • A numeric value to search this line only

Field	Description
Occurrence	<p>Legal values are:</p> <ul style="list-style-type: none"> • First If the scan argument occurs more than once on the same page or in the same window, only the first occurrence is indexed. • Last If the scan argument occurs more than once on the same page or in the same window, only the last occurrence is indexed. • Any (default) All occurrences are indexed.
Warning Level	<p>Determines the behavior of the Reader if an index cannot be created or can only be created in an incomplete manner:</p> <p>Ignore Processing continues.</p> <p>Warning The message IRM1725W is output. Processing continues.</p> <p>Error The message IRM1725E is output and the list is not read-in.</p>
Input Required	<p>If Yes, then the respective input field is a required field, i.e. a value must be entered in this field (the entered value must not begin with a mask).</p> <p>The entry is valid if the query mask is created dynamically. Use the respective field in the layout definition for a user-defined query mask (layout).</p>
Enable Range Selection	<p>If Yes, two input fields are displayed for this index, in order to enable a search according to range.</p> <p>The entry is valid if the query mask is created dynamically. Use the respective field in the layout definition for a user-defined query mask (layout).</p>

**Index Definition panel
(Page 3)**

```

PE97ID12 ----- Page 3 of 4
Command ==> _____

Form : REJ      Extension : TRADE      Report :
Owner: CUST001  Index      : CUSTOMER   Format  : STRING
                                           Instance: 000

Index Format DECIMAL:
Decimal Positions ==> 0                (0 - 5)
Decimal Character ==> _

Input string ...      Substituted by ...
==> _____      ==> _____
==> _____      ==> _____
==> _____      ==> _____
==> _____      ==> _____

Press ENTER to insert the definition. Press DOWN to display the next page, or
UP to display the previous page. Press END to return to the previous panel.
    
```

Fields (Page 3)

Field	Description
Decimal Positions Decimal Character	If Format = Decimal : Decimal character and the number of places after the decimal character
Input string ... Substituted by ...	Before being processed further, each value extracted for this index passes through each substitution rule specified here (string is replaced by another string or a zero string; masks are not supported). Example: For generating a decimal index, D for Debit should be replaced by a Minus (-) and C for Credit respectively by a Plus (+).

**Index Definition panel
(Page 4)**

```

PE97ID13 ----- Page 4 of 4
Command ==> _____

Form : REJ      Extension : TRADE      Report :
Owner: CUST001  Index      : CUSTOMER   Format  : STRING
                                           Instance: 000

Execution Order ==> BEFORE_ (A)fter, (B)efore

Enter Filter Search Argument Formula
_____
_____
_____
_____
_____
_____

Press ENTER to insert the definition. Press UP to display the previous page.
Press END to return to the previous panel.
    
```

Fields (Page 4)

Field	Description
Execution Order Filter Search Argument Formula	Filter search argument formulas are not used by Adabas Audit Data Retrieval.

Picture strings for scan arguments

General syntax

Use the following general syntax when defining scan arguments:

To search for a ...	Enter the following argument:
string	<i>string</i> or <i>'string'</i>
hexadecimal string	<i>X'hex_string'</i>
pattern	<i>P'picture'</i>

Enclosing a search argument in single quotation marks

You may enclose the entire search string in single quotation marks. For example, the following two search arguments will lead to the same result:

- ABC
- 'ABC'

You must enclose the search string in single quotation marks if the search string includes blanks (see sidehead "Searching for blanks" on page 74).

Picture strings

The following characters can be used to define picture strings in scan arguments:

This character ...	Represents ...								
A	any alphabetic character								
U	any uppercase alphabetic character								
L	any lowercase alphabetic character								
9	any numeric character								
B	a space character (blank)								
N	any non-space character								
*	any single character								
S	any of the following special characters (see hexadecimal notation in table; the characters from codepage 037 (English) and codepage 273/1141 (German) are examples only):								
	Hex	037	273	Hex	037	273	Hex	037	273
	4D	((7A	:	:	6B	,	,
	5D))	5E	;	;	6E	>	>
	5C	*	*	7F	"	"	4C	<	<
	50	&	&	7D	'	'	4E	+	+
	6C	%	%	60	-	-	6F	?	?
	5B	\$	\$	7E	=	=	4F		
	7B	#	#	61	/	/			
	7C	@	§	4B	.	.			

Searching for single quotation marks

Place two single quotation marks in the scan argument when looking for this character in the list.

For example, to search for a string consisting of two uppercase letters (**AB**, **BC**, **DE**, etc.) enter the following in the scan argument:

- P 'UU'

To search for a string of two uppercase letters enclosed in single quotation marks ('**AB**', '**BC**', '**DE**', etc.), enter the following in the scan argument:

- P ' 'UU' '

You may also enter the entire search string or part of the search string in hexadecimal notation (see "Searching for hexadecimal strings" on page 74).

Searching for blanks

Use single quotation marks to enclose a search string that contains one or several blanks.

Alternatively, you can also code a blank in a search argument as follows:

- Using a search pattern (P 'B')
- Using hexadecimal notation (X'40')

P'B' or enter a hexadecimal string instead.

The following three search strings are equivalent:

- 'ABC DEF'
- ABCP'B'DEF
- 'ABCP'B'DEF'

Searching for hexadecimal strings

You can also use hexadecimal notation when defining scan arguments.

For example, to search for the string "ABC DEF" (EBCDIC) of the previous example, you can enter the entire search string or part of the search string in hexadecimal notation:

- X'C1C2C340C4C5C6'
entering the entire search string in hexadecimal notation
- ABCX'40'DEF
entering the blank in hexadecimal notation (ABCX'40'DEF)
- 'ABCX'40'DEF'
entering the blank in hexadecimal notation ('ABCX'40'DEF') and enclosing the entire string in single quotation marks ('ABCX'40'DEF')

Combining strings, hex strings, and patterns

You may combine strings, hex strings, and patterns in a scan argument.

For example, to search for the string "LST*n*.REPORT*n*", where *n* refers to any numeric character, enter one of the following in the scan argument:

- LSTP'9'.REPORTP'9'
- 'LSTP'9'.REPORTP'9''

The following examples combine a string, a hex string (EBCDIC), and a pattern:

- LSTP'9'X'4B'REPORTP'9'
- 'LSTP'9'X'4B'REPORTP'9''

More examples

The following examples illustrate how you can define scan arguments using picture strings.

This pattern ...	Will find ...	But not ...
P'999S999'	123.456 124-568 123/421	123-ABC 125##### 1234567 123A456
P'999'-P'999'	123-456 124-568	123-ABC 125.123
P'AAAS999'	ABC.456 xyz-568	123-456 123-ABC ABC-ABC
P'999SUUU'	123.ABC 456-XYZ	123-456 123-abc XYZ-XYZ
P'LLLS999'	abc.456 xyz-568	123-456 ABC.123 ABC-ABC

Even more examples

The following examples illustrate how you can combine a fixed string and a picture strings when defining scan arguments.

This pattern ...	Will find ...	But not ...
CUST#P'9' or 'CUST#P'9''	CUST#0 CUST#1 CUST#2 CUST#9	CUST#A CUST#a CUST## CUST#
CUST-P'A' or 'CUST-P'A''	CUST-A CUST-B CUST-Z	CUST-1 CUST-# CUST
CUST-P'U' or 'CUST-P'U''	CUST-A CUST-B CUST-Z	CUST-a CUST-1 CUST-# CUST
CUST-P'L' or 'CUST-P'L''	CUST-a CUST-b CUST-z	CUST-A CUST-1 CUST-# CUST
CUSTP'S*' or 'CUSTP'S*''	CUST#9 CUST-a CUST-Z CUST##	CUSTAA CUST01 CUST1 CUSTA
CUSTP'B*' or 'CUST P'*''	CUST 9 CUST a CUST Z CUST #	CUSTAA CUST01 CUST1 CUSTA
CUSTP'N*' or 'CUSTP'N*''	CUST-9 CUST1a CUST#Z	CUST 9 CUST a CUST Z CUST #

Secondary indexes

Index types

Adabas Audit Data Retrieval supports two types of list-related indexes: primary indexes and secondary indexes.

- Primary indexes

A primary index stores the indexed values in alphabetical order. A primary index is efficient when looking for a specific value.

- Secondary indexes

A secondary index stores the indexed values ordered by page number (or item number). A secondary index is efficient when looking for the values that are located on a specific page (item).

Secondary indexes are therefore efficient only when used in combination with primary indexes. Secondary indexes are suitable when finding the common hits in AND queries where one query returns a relatively small number of hits (primary index) and the other query returns a relatively large number of hits (secondary index).

Structure of a secondary index

Secondary indexes are sorted by page number (item number). Adabas Audit Data Retrieval achieves this by creating a two part index key during index generation: the first part of the index key is the page number (or item number) and the second part of the index key is the actual value to be indexed.

Example

If a primary index is created for the types of bookings in an account list, the index key contains the values CHEQUE, CREDIT, INTEREST, etc.

If a secondary index is created for the types of bookings in an account list, the index key contains the values xxxxxxxxCHEQUE, xxxxxxxxCREDIT, xxxxxxxxINTEREST, etc. where xxxxxxxx is the page number (or item number) where the value was found.

Example of use

An account list includes the fields account number and booking type. If a primary index is created for both account number and booking type, then a query like "Find all bookings of the type CHEQUE for account 123456" is processed like this:

Step 1: Retrieve all hit pages for value **123456** in the first index (account number)

Step 2: Retrieve all hit pages for value **CHEQUE** in the second index (booking type)

Step 3: For each hit page returned by second query, check whether it is also contained in the first hit list

Result: All hit pages containing bookings for account 123456 with the booking type CHEQUE

If a primary index is created for account number and a secondary index for booking type, then a query like "Find all bookings of the type CHEQUE for account 123456" is processed like this:

Step 1: Retrieve all hit pages for value **123456** in the first index (account number)

Step 2: For each hit page do the following:

Retrieve the hit pages for the value **xxxxxxxCHEQUE** in the second index (booking type), where xxxxxxxx is the page number of the hit retrieved in step 1

Results: All hit pages containing bookings for account 123456 with the booking type CHEQUE

In the second case (**with** secondary index) the selection described in step 2 is carried out several times, namely once for each hit page retrieved from the first index. However, step 3 is omitted and therefore the total number of operations executed is considerably smaller than in the first case (**without** secondary index).

How to define a secondary index

A secondary index is defined via the field **Index Level** on page 1 of the index definition:

1 = Primary index

2 = Secondary index

Considerations

Before you define an index as a secondary index, you should be aware of the following:

- Because the index key includes the item or page number, the maximum length of the value that can be indexed is reduced to 34 characters (instead of 42 characters in primary indexes).
- Secondary indexes require more space in the database (8 byte per record).
- For high performance, secondary indexes must be used in combination with primary indexes. When a search is entirely based on a secondary index, the performance will be lower because the entire index needs to be searched sequentially.
- The maximum number of pages/items is 4,000,000,000.

Recommendation: Defining required fields

Corresponding definitions should prevent users from submitting queries that do not involve the use of a primary index. To force users to enter values in the corresponding fields, you can use the field **Input required** in the index definition of the primary index or in the corresponding layout definition of the query mask. The value specified in the index definition is stored in the generation record at read-in time and is valid when the query mask is generated dynamically. When a user-defined query mask is used instead, the value in the layout definition applies.

Under certain conditions it may make sense to define two indexes for the same values, namely only primary index and one secondary index.

Global indexes

Overview

The indexes that are created by Adabas Audit Data Retrieval when a list is read in are list-based indexes. Each of these indexes allows a **search in a specific list generation**.

Adabas Audit Data Retrieval is also able to create so-called global indexes, which are generated on the basis of list-based indexes (see "Index types" on page 24).

A global index is a list-independent index, which contains the hit lists of several index generations. Global indexes enable you to **search for list generations**.

Creating global indexes is optional. Create global indexes if you have to find lists via indexed contents.

For which indexes are global indexes created

The creation of global indexes is triggered via the structure information in the ALOG dataset or the index definition (Index Level = 0).

The processing is controlled via processing instructions at folder level (see "Processing instructions for global indexes" on page 92).

Validating definitions for global indexes

Definitions are validated as follows for global indexes:

1. Adabas Audit Data Retrieval checks at reading-in time that the list is assigned to a folder.
2. B97GLOBL checks that the folder has active processing instructions for a global index.
3. Adabas Audit Data Retrieval checks at search time that the query mask defined by the layout definition is valid.

Layout is a required field in the processing instructions of the folder.

Important: Use the same owner

The same **Owner** must continuously be used in all definitions which are used by a global index! The **Owner** can also continuously be blank in all definitions.

Of course, global indexes of different owners can also be stored in the same global index database.

GLOBAL Spool

The global indexes are stored in the spool files of the type GLOBAL. Each global index contains the data of an index name. The indexes can originate from the same or different lists.

Each global index only contains data of a fixed period. This limits the amount of data which has to be processed during the update. A new global index is created for this index name after the expiration of this period. This time period is determined in the processing instructions (see "Processing instructions for global indexes" on page 92).

Updating the global index The global index update is carried out via the batch utility B97GLOBL. The requests for this utility are administered in the table of the internal global index records (IGL):

- When the new lists are read in, a request is generated for each newly created index with the index level 0, so that the respective hit list is taken over in the corresponding global index.
- When the lists are expired, a request is generated for each corresponding index with the index level 0, so that the respective hit list is removed from the corresponding global index.

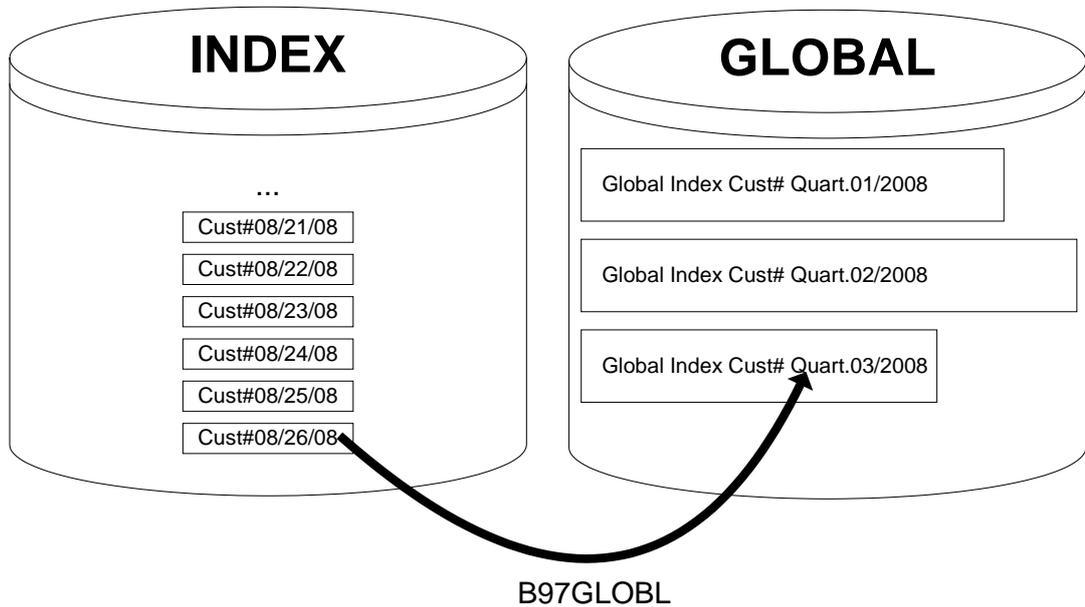
You can display the internal global index records (IGL) under Option 3 - UTILITIES.

Example

The following illustration shows the local index generations of a list, which are stored in the INDEX spool. The list is read in anew on a daily basis, and a new index is created daily.

The global indexes are stored in the GLOBAL spool. In the example, the creation of a global index started at the beginning of 2008. The processing instructions determine that a new global index is created for every quarter.

The illustration shows how the hit list of the index generation, which was created on August 26, is sorted in the third quarter by B97GLOBL.



Creating definitions for a global index

These definitions are required, so that global indexes can be created from the local indexes:

1. Create a query mask (Layout) with input fields (Option 2.6).
You must create a layout definition (see page 101) with appropriate subordinate layout definitions (see page 103).
2. Create a folder definition (Option 2.4) (see page 88).
3. Define a processing instruction for the global index for this folder (Option 2.4, line command G) (see page 92).
Enter the name of the user-defined query mask (Layout name definition) in the processing instruction, which you have created in Step 1.
4. Assign the corresponding list to this folder (Option 2.4, line command L) (see page 90).
5. Create a folder group (Option 2.5) (see page 94).
6. Assign this folder group to the folder which you created in Step 2 (Option 2.5, line command F) (see page 90).

A folder group allows a global search spanning several folders. A folder group can, for example, represent a subject group. If the global search in your system is always carried out at folder level, create a folder group for each folder.

7. If you are using index definitions, enter the value 0 (=global) in the **Index Level** field (Option 2.1, line command IX) (see page 64).

Updating the global index

1. Read the list(s) in anew in order to create new indexes.
Check (e.g. under Option 3.1) whether an internal global index record (IGL) has been created for each of the concerned index generations (definition has index level 0).

```

PE97IL05 ----- Row      1 of      2
Command ==> _____ Scroll ==> PAGE

Display Internal Global Index Records           Selection : READER

S - Select   D - Delete   R - Reset error flag

Sel Date      Time      Form      Extension      Report      Mi Md Ok Er
  Owner      Folder
02/22/2008 13:25:58 REJ      TRADE          ORDER          Y  N  N  N
CUST001     REJ-TRADE          0000  0000
-----
02/22/2008 13:25:58 REJ      TRADE          CUSTOMER       Y  N  N  N
CUST001     REJ-TRADE          0000  0000
-----
***** BOTTOM OF DATA *****
    
```

These IGLs have this status:

Marked for Insertation	: YES	Successfully Processed	: NO
Marked for Deletion	: NO	In Error	: NO

2. Run the batch utility B97GLOBL.

Expected result:

The hit lists of the indexes concerned are inserted in the corresponding global indexes.

Verification:

The IRMPROT log of B97GLOBL displays that the indexes were processed.

```

...
START FOR GLOBAL : ordnername
                INDEX : CUSTOMER#
                OWNER : ownername

START : 01.04.2008  END : 30.06.2008      / (IGL) INSERT : 00001
                                           DELETE : 00000

INDEXES EXPECTED : 000000101204          GLOBAL INDEXES EXPECTED : 000000000000
SELECTED : 000000101204                 GLOBAL INDEXES SELECTED : 000000000000
IGNORED : 000000100440                 GLOBAL INDEXES DELETED : 000000000000
INSERTED : 000000000764                 GLOBAL INDEXES INSERTED : 000000000764
...

```

In addition, another status is now displayed for the internal global index records (IGL) under Option **3.n**.

Marked for Insertation	: YES	Successfully Processed	: YES
Marked for Deletion	: NO	In Error	: NO

Note on search spanning several indexes

Note the following for searches spanning several indexes:

- The search in a global index is list-based. This search delivers hits if the search terms occur **in the same list**.
- The search in indexed lists is page-based (or item-based). This search delivers hits if the search words occur **on the same page** (or in the same item).

It is thus quite possible that a global index search returns a list as a hit, but that the subsequent search in the indexed list does not find any hits.

Search arguments (Option 2.2)

Overview

Search arguments are used in filter search argument formulas, which are not supported by Adabas Audit Data Retrieval.

Index descriptions (Option 2.3)

Overview

Optionally, you can create index descriptions for your indexes.

An index description defines the text label that will be used for this index in the query panel (field description).

An index description is associated with an index via the index name. During index creation, Adabas Audit Data Retrieval retrieves the field description from the matching index description and stores it with the index. If there is no matching index description, the index name will be used as field description for the query panel.

Note: If you want to enable the selection of lists via index names (for example, under option **I**), each index name **must** have a corresponding index description.

Navigation

From the "Primary Selection Menu" choose:

- Option **2.3**

The "Select Index Description Definitions" panel is displayed, where you can specify your selection criteria.

Index Description Definition panel

```

PE97IR10 -----
Command ==> _____

Insert Index Description Definition

Index Name      ==> .....

Field Description ==> .....

Owner          ==> _____

Press the ENTER key to insert the index description definition.
Press the END key to return to the previous panel.

```

Fields

Field	Description
Index Name	Index name The index description is used for all indexes of this name; index definitions are created using option 2.1 , line command IX .
Field Description	Field description to be displayed in the query panel (3270-type terminal) or query dialog of the web interface
Owner	The owner is passed to the security exit and can be used for defining security profiles (optional; max. 8 characters).

Line commands

The following line commands are available in the "Index Description Definitions" table:

- S** Selects an index description definition
- I** Adds an index description definition (insert)
- C** Adds an index description definition (copy)
- D** Deletes an index description definition
- HD** Create an online help text for display by a web interface

Note: The display function is not supported at present.

**Example:
Index description
defining field description**

For example, you have defined an index definition under the index name **CUSTOMER#** to extract customer numbers from a list. The index description for the index name **CUSTOMER#** specifies **Enter customer number** in the **Field Description** field.

```

PE97IR10 -----
Command ==> _____

Insert Index Description Definition

Index Name      ==> CUSTOMER#.....
Field Description ==> Enter customer number.....

Owner          ==> CUST001_

Press the ENTER key to insert the definition.
Press the END key to return to the previous panel.
    
```

If this is the only index of the list, the following query panel will be displayed when you enter the line command **IX** in the List/Report Selection panel:

```

PE97IX05 -----
Command ==> _____ Scroll ==> CSR_

Select List Index Entries
Form: REJ      Extension: TRADE      Report:

Enter customer number ==> _____ ONL

Pages with Hits: 0
Lines with Hits: 0      Retrieve Immediately ==> YES (Y)es,(N)o

Enter a value or a mask and press ENTER to generate the list index entries.
Enter V to display, P to print, or press END to return to the previous panel.
    
```

Folders (Option 2.4)

Why does one need folders?

A folder definition contains a collection of any number of list definitions, which should be processed together. Folder definitions are required for the following tasks:

- Selection of lists with the help of folders

Under option 1 (BROWSE) or option I (INDEX), users can specify the name of a folder to select all lists assigned to this folder.

Example: The folder MYFOLDER contains the list definitions ABC.EFG and UVW.XYZ. Users can select the generations of these two lists in one query by specifying the folder MYFOLDER in the selection panel.

- Creating global indexes to enable searching for lists

Rules for processing global indexes are defined at folder level. They are valid for the global indexes of the lists, which are assigned to these folders.

There is no need to create folder definitions if you are not using any of these two functions.

List and folder assignment

Any number of list names (form and extension from the Adabas Audit Data Retrieval list definition) can be assigned to a folder definition. Each list definition can be assigned to any number of folder definitions.

Navigation

From the "Primary Selection Menu" choose:

- Option 2.4

The "Select Folder Definitions" panel is displayed, where you can specify your selection criteria.

See "Assigning lists to a folder" on page 90 for detailed instructions on how to assign lists to a folder.

Folder Definition panel

```

PE97GN10 -----
Command ==> _____

Insert Folder Name Definition

Folder Name ==> BOB'S.....
Title       ==> ROBERT MILLER'S LISTS_____
Owner      ==> CUST001_
Sec-Level  ==> _____

Press the ENTER key to insert the folder name definition.
Press the END key to return to the previous panel.
    
```

Fields

Field	Description
Folder	Folder name (max. 32 characters) Note: Folder names may contain single quotation marks (').
Title	Descriptive title (max. 40 characters)
Owner	The owner is passed to the security exit and can be used for defining security profiles (optional; max. 8 characters).
SecLevel	The security level is passed to the security exit and can therefore be used for defining security profiles (optional; max. 8 characters).

Note:
Masks when selecting lists via folders

The following LST parameter determines whether users can specify masks when selecting lists via folder names under option 1 - BROWSE:

- B97_FOLDER_SELECTION_GENERIC = YES
Masks can be used.

Example: There are two folders, namely **FOLDER1** and **FOLDER2**. Users can select the lists assigned to these folders by specifying **FOLDER*** or **FOLDER%** in the **Folder** field.

- B97_FOLDER_SELECTION_GENERIC = NO
Masks (except for *) cannot be used.

To select lists via folder names, users must specify a folder name in the **Folder** field. The **Folder** field contains an asterisk or is blank when the selection does not use folder names.

Assigning lists to a folder

Overview

You can specify one or several list names in each folder. You can assign a list to a folder only if a list definition exists under this name (form and extension).

Each list definition can be assigned to any number of folders.

Following are descriptions of two alternative procedures that can be used when assigning lists to a folder. The descriptions assume that a folder exists, without describing how to define the folder itself.

Note on folder groups

Both procedures can also be used when assigning folders to folder groups (see "Folder groups (2.5 GROUPS)" on page 94).

Procedure 1: Assigning lists by specifying names

This procedure is convenient for assigning an individual list to a folder when you know the form and extension of the list.

To assign a list to a folder:

1. From the Primary Selection Menu, choose option **2.4**.
2. Type selection criteria in the displayed panel and press ENTER.
3. Enter line command **L** in front of the folder.

If no list has been assigned to this folder, this will display the List/Report in Folder panel and you can proceed with step 5.

4. Enter line command **I** in front of any list in folder assignment.

This will display the List/Report in Folder panel.

5. Type the name of an existing list definition in the **Form** and **Extension** fields and press ENTER.
6. Press PF3 to return to the Lists/Reports in Folder table.

**Procedure 2:
Selecting and assigning
lists using a table**

This procedure is convenient for assigning several lists to a folder in one step or for assigning an individual list to a folder when you do not know the exact form and extension of the list.

To assign one or several lists to a folder (steps 1 through 4 of procedure 1 and procedure 2 are identical)

1. From the Primary Selection Menu, choose option **2.4**.
2. Type selection criteria in the displayed panel and press ENTER.
3. Enter line command **L** in front of the folder.

If no list has been assigned to this folder, this will display the List/Report in Folder panel and you can proceed with step 5.

4. Enter line command **I** in front of any list in folder assignment.

This will display the List/Report in Folder panel.

5. Type masks in the **Form** and **Extension** fields and press ENTER.

This will display the matching definitions in the List/Report Definitions table.

6. Type the line command **S** in front of the list(s) that you want to assign to this folder and press ENTER.

7. Press PF3.

This will display the (first) list in folder assignment selected.

8. Press ENTER to insert this list in folder assignment.

9. If you selected additional lists in the List/Report Definitions table, confirm these lists in folder assignments also by pressing ENTER.

Note: To prevent that a list in folder assignment is inserted, press PF3. To prevent that a confirmation panel is displayed for each list, specify **Yes** in the **Suppress Confirmation** field; all remaining list in folder assignments you selected will be inserted without confirmation.

Processing instructions for global indexes

Instructions

A processing instruction for a folder is defined as follows:

1. Select Option **2.4** from the Primary Selection Menu
2. Enter the selection criteria in the displayed panel and press ENTER.
3. Enter the line command **G** in front of the folder definition

Processing Instructions for Global Indexes table

```

PE97GP05 ----- Row          1 of          1
Command ==> _____ Scroll ==> PAGE

Display Processing Instructions for Global Indexes          ( LEFT/RIGHT )

Folder           : REJ-TRADE                               Owner      : CUST001

S - Select      I - Insert    C - Copy      D - Delete
V - Verify Global Indexes

Sel  Ins A Valid from Valid to   Interval StartDate Layout
I 000 + 01/01/2008 12/31/9999 003 MONTH 04/01/2008 REJ-TRADE
***** BOTTOM OF DATA *****
    
```

Note

A plus sign (+) in the **A** column indicates that a processing instruction is active and a minus sign (-) indicates that it is inactive. Whether a definition is active or inactive is determined by the from/to date specified in the definition. Only one processing instruction can be active at a time.

Processing Instructions for Global Indexes panel

```

PE97GP10 -----
Command ==> _____

Insert Processing Instruction for Global Indexes

Folder           : REJ-TRADE                               Owner      : CUST001

Instance Number          ==> 000                          (0 - 999)
Time Interval            ==> 003                          (1 - 600) Month
Start Date for Time Interval ==> 04/01/2008              (MM/DD/YYYY)
Layout                  ==> REJ-TRADE.....              (Name or mask)
Definition valid from    ==> 01/01/2008                  (MM/DD/YYYY)
                        to      ==> 12/31/9999            (MM/DD/YYYY)

Press the ENTER key to insert the processing definition.
Press the END key to return to the previous panel.
    
```

Fields

Field	Description
Instance Number	<p>Legal values: 0 through 999</p> <p>The instance number is used to create a uniqueness, as several processing instructions with different validities can be defined for the same folder.</p>
Time Interval/ Start Date for Time Interval	<p>Enter a suitable time interval in order to group the data that belongs together into units. This serves the following purposes:</p> <ul style="list-style-type: none"> • The quantity of the data to be scanned is limited for the global index search (Option G). • During the archival, the units belonging together are archived (currently not available) <p>The start date determines the time when the creation of a new unit should be begun.</p> <p>Example: Global index searches of this index are based on a quarter of a year. Enter the value 3 Months as time interval, and the value, for example 01.04.2008 as start date. The global indexes are then combined into quarterly units. In order to carry out a global index search over a quarter, only one unit, which solely contains data for this quarter, must then be scanned.</p>
Layout	<p>The query mask that is defined under the specified layout name is to be used for this folder for the global index search under option G (required).</p>
Definition valid from/to	<p>Period in which this processing instruction is valid.</p> <p>Only one processing instruction can be active at a time.</p>

Folder groups (2.5 GROUPS)

Why does one need folder groups?

A folder group contains a collection of any number of folders. At least one folder must be assigned to a folder group.

Folder group definitions are required for the following task:

- Search in a global index (Option **G**)

There is no need to create folder group definitions if you are not using this function.

Functions for a global index search

A global search can either be carried out at the folder group level or at the folder level. A folder group can, for example, in this connection, represent a subject group.

Prerequisite for the global search on the folder group level is that all assigned folders use the same query mask (Layout).

Navigation

From the "Primary Selection Menu" choose:

- Option **2.5**

The "Select Folder Group Definitions" panel is displayed, where you can specify your selection criteria.

When assigning folders to folder groups, proceed in the same manner as when assigning lists to folders (see "Assigning lists to a folder" on page 90).

Folder Group Definition panel

```

PE97FN10 -----
Command ==> _____

Insert Folder Group Definition

Folder Group ==> REJ1.....
Owner        ==> _____

Title        ==> ..... (Case sensitive)

Sec-Level    ==> _____

Press the ENTER key to insert the folder group definition.
Press the END key to return to the previous panel.

```

Fields

Field	Description
Folder Group	Folder group name (max. 32 characters)
Owner	The owner is passed to the security exit and can be used for defining security profiles (optional; max. 8 characters).
Title	Descriptive title (max. 40 characters; this field is case sensitive)
Sec-Level	The security level is passed to the security exit and can be used for defining security profiles (optional; max. 8 characters).

Assigning folders and folder groups

Any number of folder definitions can be assigned to a folder group definition. Each folder definition can be assigned to any number of folder group definitions.

User-defined query masks (Option 2.6)

Overview

Layout definitions are used to define query masks (layouts).

Note on layout groups

It is possible to place multiple layouts into a layout group with the help of the **Layout Group** field.

When you start a search, Adabas Audit Data Retrieval displays the layouts of the layout group for selection when the layout group has more than one layout.

Using query masks

Layout-based query masks can be used for:

- Global index search

If you create a processing instruction for a folder for the global index generation, the name of a layout group must be specified in this processing instruction (required field). The corresponding query mask is used for the global index search for this folder or the superordinate folder group.

The use of layout definitions is required when working with global indexes.

- List-based index search

By default, the following applies for the query panel that is displayed with the line command **IX** or the primary command **IA**:

The query panel is built dynamically according to the indexes available for the list(s). The field descriptions and their order are determined by the settings in the index definitions and the index descriptions at the time when the list is read in.

Alternatively, the administrator can also define a query mask (layout) which then determines the structure of the query panel.

The use of layout definitions is optional when working with local indexes.

Query mask for list-based index search

You can define query masks for any list, for example, in order to add help texts in the query panel.

You must define query masks for the search in the indexes of a list in the following cases:

- If you want to prevent that the values entered by a user are stored in his profile and redisplayed in future queries.
- If input fields should be grouped as an alternate, for example, to make input required for alternative primary indexes during the search with secondary indexes.

Alternative subgroups of input fields

Normally, the following applies to query panels:

- All input fields containing values are linked with Boolean AND in the query.
- Values must be entered in all required fields.

With the help of the subgroup number of the layout definition, it is possible to create several subgroups of input fields, for example, in order to define alternative subgroups with required fields. The following applies to query panels that contain subgroups:

- Values can be entered only in the fields of **one** subgroup and in the fields that are not assigned to any subgroup (subgroup 0)
- Required fields in unused subgroups are ignored

All fields with the subgroup number 0 are not assigned to any subgroup and are valid at all times. They are combined in the query with the fields of the used field subgroup (Boolean operator AND).

Query panel with query mask

This example shows a query panel with a query mask that comprises two subgroups of fields:

```

PE97IX05 -----
Command ==> _____ Scroll ==> PAGE

Select List Index Entries
Form: REJ      Extension: INVENTORY      Report:

      Customer number ==> .....          ONL
      Article ==> _____            ONL

or

      Order number ==> .....            ONL
      Article ==> _____            ONL

Items with Hits: 0
Lines with Hits: 0      Retrieve Immediately ==> YES (Y)es,(N)o

Enter a value or a mask and press ENTER to generate the list index entries.
Enter U to display, P to print, or press END to return to the previous panel.

```

48

:00.1

14/39

The query mask is vertically centered in the query panel. The elements of the query mask are displayed as follows:

- All field descriptions (in the example **Customer number**, **Order Number** and **Article**) are displayed with the attributes for Normal Output. Field descriptions are right-justified relative to the arrow of the input field.
- All additional texts (in the example **or**) are displayed with the attributes of Action Explanations. Additional texts are left-justified relative to the border of the panel.

Required definitions for query masks

The name of the query mask is defined in the layout definition. The elements (lines) of the query mask are defined in subordinate layout definitions.

To define a query mask, create a layout definition under option **2.6** first. Afterwards, create a subordinate layout definition (line command **L** in front of layout definition) for each line of the query mask.

You can use the **Layout Group** field in the definition to create a group that contains multiple layouts. Simply specify the same layout group in multiple definitions. Specify the same name in the **Layout Group** and the **Layout Name** field if you don't want to work with layout groups.

If a query mask is to be used for a list-based index search, the name of the layout group must be stored in the generation record of the list. Enter the name of the layout group in the list definition so that it will be stored in the generation record at read-in time. You can also change this setting in the generation record after the list has been read in (line command **E**).

For the global index search, the name of the layout group must be stored in the processing instructions of the folder.

If a layout group contains more than one layout, the layouts are displayed in a table for selection when a user starts a search via the line command **IX**. Entering line command **S** in front of a layout takes the user to the query panel.

Query mask only if total match

Before the query panel is displayed, the existing index data are checked first whether they match:

- For the global index search, at least one global index must exist for each field of the query mask (subordinate layout definition). For a folder group search, it is additionally checked whether the same layout group has been specified for all folders.

This means that the query mask can only contain layout definitions for global indexes and that the query mask can only be displayed after the global indexes have been successfully created by B97GLOBL.

Corresponding messages appear in case of error.

```

PE97GX05 ----- Request rejected
Command ==> _____ Scroll ==> PAGE
MEIRI056 - Global index CUSTOMER# was not built for folder REJTRADE.
Global Index Search

IX - Global Index Search      S - Select

Sel  Description                                Owner
IX Search for Customer Number          CUST001
***** BOTTOM OF DATA *****
    
```

- For the list-based index search, a local index generation must exist for each field of the query mask.

If this is not the case, the query panel is generated dynamically (standard procedure). Online messages display why the query mask (layout name) entered in the list generation record was not used.

```

PE97IX05 ----- Layout rejected
Command ==> _____ Scroll ==> PAGE

Select List Index Entries
Form: REJ      Extension: INVENTORY      Report:

                                CUSTOMER ==> ..... ONL
                                ORDER ==> ..... ONL

Items with Hits: 0

MEIRI052 - Index ARTICLE (layout REJINVENTORY) not built for the selected
list(s).
    
```

A corresponding check is carried out when the primary command **IA** is entered. In this case, the fields of the query mask must match the indexes that the lists have in common (intersecting set). In addition, different layout groups cannot be specified in the lists (it is okay though if some lists do not specify any name at all).

Layout definitions

Navigation

From the "Primary Selection Menu" choose:

- Option 2.6

The "Select Layout Definitions" panel is displayed, where you can specify your selection criteria.

Layout Definition panel

```

PE97DN10 -----
Command ==> _____

Insert Layout Definition

Layout Group ==> REJINVENTORY....
Layout Name  ==> REJINVENTORY....

Title        ==> QUERY MASK FOR REJ.INVENTORY_____ (Case sensitive)
Owner        ==> _____

Press the ENTER key to insert the layout name definition.
Press the END key to return to the previous panel.
    
```

Fields

Field	Description
Layout Group	Name of the layout group Specify the same layout group in multiple layout definitions if you want to create a group that contains multiple layouts.
Layout Name	Name of the layout
Title	Descriptive title
Owner	Owner of this definition

Deleting a query mask

When you delete a layout definition, the layout definition and all its subordinate layout definitions are deleted. Adabas Audit Data Retrieval does not check whether this layout is still referenced by other definitions or list generations. If you want to make sure that a layout is not used elsewhere before deleting it, you can do this by entering the following line commands in front of the layout definition:

- **VG** displays whether the layout group is referenced in any list generation record
- **VD** displays whether the layout group is referenced in any list definition
- **VF** displays whether the layout group is referenced in the processing instructions of any folder

Note: Processing these line commands may take a considerable amount of time, depending on the number of list definitions or list generations.

Subordinate layout definitions

Navigation

To navigate to the subordinate layout definitions of a layout definition:

1. From the "Primary Selection Menu", choose option **2.6**.
2. Type selection criteria in the displayed panel and press ENTER.
3. Enter line command **L** in front of the layout definition.

Layout Definition panel

```

PE97DG10 -----
Command ==> _____

Insert Layout Definition

Layout Group      : REJINVENTORY      Owner : CUST001
Layout Name       : REJINVENTORY

Number            ==> 040              (1 - 999)

Sub-Group Number ==> 01                (1 - 99 or 0 for a single element)
Index Name        ==> LOCATION_____ (Name or mask)
Description       ==> Location_____

Input required ... ==> YES              (Y)es,(N)o
... for search level ==> BOTH__        (L)ocal,(G)lobal,(B)oth
Enable range selection ==> NO_          (Y)es,(N)o
Save input        ==> YES              (Y)es,(N)o

Press the ENTER key to insert the layout definition.
Press the END key to return to the previous panel.
    
```

Fields

Field	Description
Number	Determines the position of the element in the query mask (we recommend that you use non-sequential numbers to leave room for future modifications)
Sub-Group Number	The subgroup number (01..99) identifies elements that belong to one subgroup (when using alternative input groups). Layout definitions with the subgroup number 0 do not belong to any input group. For more information, see the sidehead "Alternative groups of input fields" in "User-defined query masks (Option 2.6)" on page 96.
Index Name	If the element defined in this layout definition is the input field of an index, then specify the name of this index. You can also specify a mask and then select the index from the list of matching index descriptions (Option 2.3). If the element defined in this layout definition is a descriptive text or an empty line, leave this field blank.

Field	Description
Description	<p>Text to be displayed</p> <p>How this text will be displayed depends on whether an index is specified in the Index Name field:</p> <ul style="list-style-type: none"> • Index specified <p>The specified text is the field description of the input field. The text will be displayed right-justified relative to the arrow of the input field. You can leave this field blank if you want the index name or the text from the index description to be displayed.</p> • No index specified <p>The specified text is a descriptive text for the query mask. The text is displayed left-justified relative to the border of the panel. If you want an empty line to be displayed at this position, leave this field blank.</p>
Input required for search level	<p>If Input required = Yes, this input field is a required field (a user must enter a value in this field; the first character of this value must not be a mask).</p> <p>The for search level field defines whether input is required at a specific index level (local, global, or both).</p> <p>If the query mask includes alternative groups of fields, the required fields of unused subgroups are ignored.</p>
Enable range selection	<p>If Yes, two input fields are shown for this index in order to enable a search within a range.</p>
Save input	<p>Determines whether the value entered by a user is stored and used for prepopulating this field in future queries of this user (UGF table; default: Yes)</p> <p>If you specify No, Adabas Audit Data Retrieval will not store any values and it will not prepopulate the field with values of former queries.</p>

Example: Query mask

Initial situation

A list has the indexes CUSTOMERNO, ORDERNO, CUSTOMERNAME, and ARTICLE. A query mask is to be defined that forces users to enter either a customer number (CUSTOMERNO) or an order number (ORDERNO).

Required definitions

To achieve this requires a query mask with two subgroups: In one subgroup CUSTOMERNO is a required field, and in the other subgroup ORDERNO is a required field.

Recommendation: The query mask should be designed to make it clear to the user that there are two alternative ways of entering values for a query (the user is allowed to enter values in one subgroup only). This can be achieved by grouping the fields in a certain manner and possibly by duplicating some fields. Several approaches are possible.

Query mask without duplicated fields

The query mask could, for example, look like this:

```

PE97IX05 -----
Command ==> _____ Scroll ==> PAGE

Select List Index Entries
Form: REJ      Extension: INVENTORY      Report:

----- or
Customer number ==> ..... ONL
Order number... ==> ..... ONL

----- Additional values (optional)

Customer name.. ==> _____ ONL
Article..... ==> _____ ONL

Items with Hits: 0
Lines with Hits: 0      Retrieve Immediately ==> YES (Y)es,(N)o

Enter a value or a mask and press ENTER to generate the list index entries.
Enter V to display, P to print, or press END to return to the previous panel.

```

To achieve this, the following elements for the query mask need to be defined (the position of each element in the query mask can be controlled by specifying an appropriate value in the **Number** field):

- One element in subgroup 1 for the index CUSTOMERNO (Input required)
- One element in subgroup 2 for the index ORDERNO (Input required)
- Two elements in subgroup 0 for the indexes CUSTOMERNAME and ARTICLE
- Four elements without a value in the **Index Name** field for additional texts and blank lines

Query mask with duplicated fields (1)

The query mask could also duplicate the optional fields to make it clearer that there are two alternative input groups:

```

PE97IX05 -----
Command ==> _____ Scroll ==> PAGE

Select List Index Entries
Form: REJ      Extension: INVENTORY      Report:

                Customer number ==> .....      ONL
                Customer name.. ==> _____ ONL
                Article..... ==> _____ ONL
or
                Order number... ==> .....      ONL
                Customer name.. ==> _____ ONL
                Article..... ==> _____ ONL

Items with Hits: 0
Lines with Hits: 0      Retrieve Immediately ==> YES (Y)es,(N)o

Enter a value or a mask and press ENTER to generate the list index entries.
Enter V to display, P to print, or press END to return to the previous panel.

```

To achieve this, the following elements for the query mask need to be defined (the position of each element in the query mask can be controlled by specifying an appropriate value in the **Number** field):

- Three elements in subgroup 1 for the indexes CUSTOMERNO (Input required), CUSTOMERNAME, and ARTICLE
- Three elements in subgroup 2 for the indexes ORDERNO (Input required), CUSTOMERNAME, and ARTICLE
- One element without a value in the **Index Name** field for the text **or** between the two alternative input groups

Query mask with duplicated fields (2)

The query mask could also duplicate all fields to make it clearer that there are two alternative input groups, including the required field of one group as optional field in the other group.

```

PE97IX05 -----
Command ==> _____ Scroll ==> PAGE

Select List Index Entries
Form: REJ      Extension: INVENTORY      Report:

      Customer number ==> .....          ONL
      Order number... ==> _____      ONL
      Customer name.. ==> _____      ONL
      Article.....    ==> _____      ONL
or
      Order number... ==> .....          ONL
      Customer number ==> _____      ONL
      Customer name.. ==> _____      ONL
      Article.....    ==> _____      ONL

Items with Hits: 0
Lines with Hits: 0      Retrieve Immediately ==> YES (Y)es,(N)o

Enter a value or a mask and press ENTER to generate the list index entries.
Enter V to display, P to print, or press END to return to the previous panel.

```

To achieve this, the following elements for the query mask need to be defined (the position of each element in the query mask can be controlled by specifying an appropriate value in the **Number** field):

- Four elements in subgroup 1 for the indexes CUSTOMERNO (Input required), ORDERNO, CUSTOMERNAME, and ARTICLE
- Four elements in subgroup 2 for the indexes ORDERNO (Input required), CUSTOMERNO, CUSTOMERNAME, and ARTICLE
- One element without a value in the **Index Name** field for the text **or** between the two alternative input groups

System utilities (Option 3)

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System Utilities Selection Menu (Option 3)

Overview

This chapter describes the options offered in the "System Utilities Selection Menu".

The following options are available in this menu:

- Two options for the display of internal global index records (IGL)
- The option for displaying and processing reload requests

System Utilities Selection Menu

```
PE97UTL0 -----  
Option ==> _____  
  
System Utilities Selection Menu  
  
System      - PROD  
Location    - BERLIN  
Subsys-ID   - B97P  
User ID     - B97USER  
  
1  READER    - Internal Global Index Records - Select by Read-in Time  
2  LIST      - Internal Global Index Records - Select by List Time  
3  RELOAD    - Reload Requests  
  
Select one of the above options. Press END to return to the previous menu.
```

Internal global index records (IGL)

Overview

The requests for updating the global indexes are administered in the table of the internal global index records (IGL). This section describes the procedure according to which the creation and update of the internal global index records (IGL) is carried out.

Inserting in a global index

When reading in new lists, a request is created for each newly created index with the index level **0**, so that the respective hit list is taken over in the corresponding global index:

1. An IGL is created by the Reader for a newly created index (index level **0**); this IGL has this status:

Marked for Insertation	: YES	Successfully Processed	: NO
Marked for Deletion	: NO	In Error	: NO

2. B97GLOBL processes this request, inserts the hit list in the global index and updates the status of the IGL accordingly:

Marked for Insertation	: YES	Successfully Processed	: YES
Marked for Deletion	: NO	In Error	: NO

The following B97GLOBL runs delete successfully processed IGLs, if these are no longer required.

Removing from a global index

When lists have expired, a request is created for each corresponding index with the index level **0**, so that the respective hit list is removed from the corresponding global Index:

1. An IGL is created for an expired index (index level **0**) by B97DEARC (or for lists which are not archived, by B97DEONL); this IGL has this status:

Marked for Insertation	: NO	Successfully Processed	: NO
Marked for Deletion	: YES	In Error	: NO

2. B97GLOBL processes this request, removes the hit list from the global index, and updates the status of the IGL accordingly:

Marked for Insertation	: NO	Successfully Processed	: YES
Marked for Deletion	: YES	In Error	: NO

The following B97GLOBL runs delete successfully processed IGLs, if these are no longer required.

Processing errors

If an internal global index record (IGL) with an insert request could not be processed due to an error, the IGL has the following status after the B97GLOBL run:

Marked for Insertation	: YES	Successfully Processed	: NO
Marked for Deletion	: NO	In Error	: YES

IGLs with this status are neither processed anew by B97GLOBL, nor are they deleted. They must be reset or deleted manually (see "Example: Error analysis and troubleshooting" on page 115).

Normally, no processing errors can occur when deleting hit lists from the global indexes.

Select Internal Global Index Records

Overview The options offered under Option 3 - UTILITIES of the selection menu serve to select and display the internal global index records (IGL).

Time selection The following options are offered:

- 1 READER
- 2 LIST

The selection and display of the data records under these two options is the same. The only difference between these two options is to which timestamp of the IGL the specified time selection refers:

- 1 Actual read-in date/time
- 2 Adabas Audit Data Retrieval list date

Select Internal Global Index Records panel

```

PE97IL00 -----
Command ==> _____

Select Internal Global Index Records           Selection : READER

Select from Last      ==> 99 Days... 01-99 (H)ours,(D)ays,(M)inutes
or blanks to define Start/End

Start Date (MM/DD/YYYY) ==> ..... Start Time ==> _____
End Date (MM/DD/YYYY) ==> _____ End Time ==> _____

Optional Selection Criteria:

Form      ==> _____ Status ==> ERROR (O)kay,(E)rror,M(D)e1
Extension ==> _____ RC      ==> _____ M(I)ns
Report    ==> _____ IC      ==> _____
Index Name ==> _____
Folder    ==> _____
Owner     ==> CUST001_

Press the ENTER key to display the selected records.
Press the END key to return to the previous menu.
    
```

Selection according to status Enter a value in the **Status** field, if you would only like to display internal global index records with a specific status:

- Okay** Requests, which were processed by B97GLOBL error-free (when being inserted into, as well as being deleted from the global index)
- Error** Requests, which ended with an error (when being inserted into, as well as being deleted from the global index) when being processed by B97GLOBL
- MDel** Requests for deleting from the global index, which were not yet processed by B97GLOBL
- MIns** Requests for inserting into the global index, which were not yet processed by B97GLOBL

Display Internal Global Index Records

Overview

This section contains the description of the "Display Internal Global Index Records" table.

Internal Global Index Records table

```

PE97IL05 ----- Row      1 of      4
Command ==> _____ Scroll ==> PAGE

Display Internal Global Index Records           Selection : READER

  S - Select   D - Delete   R - Reset error flag

Sel  Date      Time      Form      Extension      Report      Mi Md Ok Er
   Owner      Folder
02/22/2008 13:25:58 REJ      TRADE          ORDER          Y N N Y
CUST001    REJ-TRADE          0008 0801
-----
02/22/2008 13:25:58 REJ      TRADE          CUSTOMER       Y N N Y
CUST001    REJ-TRADE          0008 0801
-----
02/22/2008 08:33:13 REJ      TRADE          ORDER          Y N N Y
CUST001    REJ-TRADE          0008 0801
-----
02/22/2008 08:33:13 REJ      TRADE          CUSTOMER       Y N N Y
CUST001    REJ-TRADE          0008 0801
-----
***** BOTTOM OF DATA *****
    
```

Fields

Field	Description
Date/ Time	The actual read-in date and time are displayed in the example (selection: READER) Note: Instead of this, the Adabas Audit Data Retrieval list date (selection: LIST) can also be displayed here.
Form/ Extension/ Report	Adabas Audit Data Retrieval form, extension and report name The report name is blank if it is a list.
Owner	Name of the owner, to whom the list is assigned
Folder	Name of the folder, to which the list is assigned
Index Name	Name of the index
Mi/ Md	Y Specifies that it is an entry for inserting (Mi) into the global index or an entry for deleting from (Md) the global index
Ok/ Er	J Specifies whether B97GLOBL could carry out the request successfully (Ok) or whether it lead to an error (Er); the request was not yet processed by B97GLOBL if an N is displayed in both cases
RC/ IC	Return Code and Info Code, with which the request ended

Line commands

The following line commands are available in the "Display Internal Global Index Records" table:

- S** Displays the data record
- D** Deletes the data record
- R** Resets the error flag

Example: Error analysis and troubleshooting

Overview

If B97GLOBL cannot carry out a request, the corresponding data record receives an error flag and the job ends with a respective error message. Errors are normally caused by the absence of matching definitions, which prevent the processing of the respective requests.

If you have located the error, correct the respective definitions. Then reset the internal global index record, so that the request is processed by the next B97GLOBL run.

This approach will be explained on the basis of an example.

Starting situation

B97GLOBL ends with RC 8; IRMPROT contains information that no matching processing instructions were found for 2 indexes:

```

-----+-----
GLOBAL  INDEX  UTILITY                                DATE:  date                                PAGE: 00001
-----+-----
INDEX RECORDS (IGL) FOUND : 000003  FOR INSERT : 000003  FOR DELETE : 000000
-----+-----
START FOR GLOBAL : REJ-TRADE
              INDEX : ORDER
              OWNER : CUST001

START : 01/01/2008  END : 06/30/2008      / (IGL) INSERT : 00001
                                           DELETE : 00000

INDEXES EXPECTED : 000000101204          GLOBAL INDEXES EXPECTED : 000000000000
SELECTED : 000000101204                 GLOBAL INDEXES SELECTED : 000000000000
IGNORED : 000000100440                  GLOBAL INDEXES DELETED : 000000000000
INSERTED : 000000000764                 GLOBAL INDEXES INSERTED : 000000000764

00002 INDEX RECORDS (IGL) WITHOUT MATCHING PROCESSING INSTRUCTIONS
-----+-----

```

Possible causes that the matching processing instructions are missing are:

- An owner entered in the IGL (taken over from the list definition) is different from that in the folder definition.
- No (active) processing instructions are available for the respective folder.
- No matching time period is specified in the processing instructions (future date?).

Display of the IGLs with error flag

Select one of the options under Option 3 (UTILITIES) in order to display the respective internal global index records. Enter the value **Error** in the Status field.

```

PE97IL05 ----- Row 1 of 2
Command ==> _____ Scroll ==> PAGE

Display Internal Global Index Records Selection : READER

S - Select D - Delete R - Reset error flag

Sel Date Time Form Extension Report Mi Md Ok Er
Owner Folder Index Name RC IC
02/22/2008 13:25:58 REJ TRADE ORDER Y N N Y
CUST001 REJ-TRADE 0008 0801
-----
02/22/2008 13:25:58 REJ TRADE CUSTOMER Y N N Y
CUST001 REJ-TRADE 0008 0801
-----
***** BOTTOM OF DATA *****
    
```

The names of the indexes, where the problem arose during processing, are displayed in this table. Check the values of the definition of the folder to which this list is assigned, as well as the corresponding processing instructions. Correct the respective definitions.

Reset IGL

The error flag must be reset in this data record, so that the request contained in the IGL is processed by the next B97GLOBL run.

Display the affected data records in the "Display Internal Global Index Records" table and enter the line command **R** in front of the affected data records. You can also use the block command **RR**. In the displayed panel, confirm the reset either individually or by suppressing the individual confirmation request.

```

PE97IL99 -----
Command ==> _____

Reset Error Flag Last Update: QI#VGLBL 02/22/2008 22:31:12

Folder : REJ-TRADE
Form : REJ ( 02/22/2008 13:25:58 )
Extension : TRADE
Report :
Index Name : ORDER ( 02/22/2008 13:25:58 )
Owner : CUST001

Marked for Insertation : YES Successfully Processed : NO
Marked for Deletion : NO In Error : YES
RC : 0008 IC : 0801

Suppress Confirmation ==> NO_ (Y)es, (N)o

Press the ENTER key to confirm the request.
Press the END key to abort the request.
    
```

Displaying and deleting reload requests

Overview

Reload requests in the reload queue are automatically created when lists are marked for reload (line command **R** or batch utility **B97BRDL**). The existing reload requests are processed by the reload batch utility **B97RLD** and are deleted after the reload has been carried out.

Navigation

From the "Primary Selection Menu" choose:

- Option 3.3

The "Select Reload Requests" panel is displayed, where you can enter your selection criteria.

Note: The date and time specification in the "Select Reload Requests" panel refers to the creation of the reload request, **not** to the read-in time of the list/report.

Select Reload Requests panel

```

PE97RQ00 -----
Command ==> _____

Select Reload Requests

Select from last      ==> 12 Hours__  01-99 (H)ours,(D)ays,(M)inutes
                        or blank to define Start/End

Start Date (MM/DD/YYYY) ==> .....  Start Time ==> ____
End Date (MM/DD/YYYY)  ==> _____ End Time ==> ____

Optional Selection Criteria:

Requester            ==> _____
Form                 ==> _____
Extension            ==> _____
Report               ==> _____
Jobname              ==> _____

Press the ENTER key to display the selected records.
Press the END key to return to the previous menu.
    
```

Fields

Field	Description
Select from Last/ Start/End Date / Start/End Time	Enter values to select reload requests that were generated within the specified time range. For more information on legal values, see the field descriptions of the List/Report Selection panel in "List/Report Selection Panel (Option 1)" on page 40.
Requester	Here you can enter the user ID which initiated the reload request.
Form/ Extension/ Report/ Jobname	Here you can enter names or masks to limit the selection according to corresponding names.

Display Reload Queue table

Matching reload requests are displayed in the "Display Reload Queue" table.

```

PE97RQ05 ----- Row          1 of      4
Command ==> _____ Scroll ==> PAGE

Display Reload Queue ( LEFT/RIGHT )

  S - Select   D - Delete   R - Restart

Sel  Read-In-Date/Time  Form   Extension   Report   Status
03/11/2020 16:28:34 REJ     TRADE       Report   WAITING
03/10/2020 14:22:49 REJ     INVENTORY   Report   WAITING
03/10/2020 14:19:48 REJ     TRADE       Report   WAITING
03/10/2020 14:12:46 REJ     TRADE       Report   WAITING
***** BOTTOM OF DATA *****
    
```

Display Reload Queue table (PF11)

Press PF11 to display further information on the reload request.

```

PE97RQ05 ----- Row          1 of      2
Command ==> _____ Scroll ==> PAGE

Display Reload Queue ( LEFT/RIGHT )

  S - Select   D - Delete   R - Restart

Sel  Read-In-Date/Time  Form   Extension   Report   Status
03/11/2020 16:28:34 REJ     TRADE       Report   WAITING
Jobname: REJTEST   Reload Date: 03/18/2020   Reload Priority: 001
JobID  : *.TXT     Reload Time: 14:44:11
User   : REINH1    Pages: 15
Message:
-----
03/11/2020 14:22:49 REJ     INVENTORY   Report   WAITING
Jobname: REJTEST   Reload Date: 03/18/2020   Reload Priority: 001
JobID  : *.TXT     Reload Time: 14:44:11
User   : REINH1    Pages: 9
Message:
-----
03/11/2020 14:19:48 REJ     TRADE       Report   WAITING
Jobname: REJTEST   Reload Date: 03/18/2020   Reload Priority: 001
JobID  : *.TXT     Reload Time: 14:44:11
User   : REINH1    Pages: 15
    
```

Table columns

Column	Description
Read-In-Date/Time	The read-in date/time of the list/report
Form/Extension/Report	Name of the list/report
Jobname/JobID	The name/JES ID of the job which originally created the list
User	The user ID of the user who requested the reload
Status	The current status of the reload request: Waiting The request is waiting to be processed by the next reload job. Active The request is being processed. Error An error has occurred during reloading. Check the reload job log to find out what caused this error.
Reload Date/Time	The date/time that the reload request was issued
Pages	The number of pages contained in the list/report to be reloaded
Reload Priority	The priority of the reload request is always 001

Line commands

The following line commands are available in the "Display Reload Queue" table:

- S** Displays a reload request
- D** Deletes a reload request
- R** Restarts a reload request

Archiving (Option A)

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Archiving concept

Overview

Adabas Audit Data Retrieval archives lists and their indexes in archive datasets. You can define whether you want to archive data in single or multiple archives. You can also define on which media data is to be archived (archive media) and how long archived data is to be kept (archive retention period).

Adabas Audit Data Retrieval compresses archived data, which reduces archive storage space by up to 70 percent. At the same time, compression also protects the archived data against unauthorized access.

Note: Archiving to disk requires SMS.

Attributes of archive datasets

Archive datasets are always allocated with the following attributes (irrespective of the device used):

- RECFM: V
- LRECL: 32756
- BLOCKSIZE: 32760

Important: Adabas Audit Data Retrieval uses hardware pointers for efficient positioning during reload. The pointers that are stored in the database must be updated when creating copies of archive datasets. To copy archive datasets, therefore always use the utility BST08OCP (see "BST08OCP: Archive copy batch utility" on page 310).

What is required for a list to be archived?

The Adabas Audit Data Retrieval archive batch utility will archive a list if the following is true:

- The list has been marked for archiving. Lists can be marked for archiving in the following ways:
 - Automatically, when reading in the list, which requires that the Adabas Audit Data Retrieval list definition specifies **Yes** in the **Automatic Archive** field
 - Manually, using the line command **A**

Note: The list generation record contains the information required for archiving (archive medium, archive retention period, and owner).

- A valid Adabas Audit Data Retrieval archive pool exists, whose definition matches the archive medium, the archive retention period, and the owner of the list.

Single or multiple archiving

Each archive pool has one or several archive subpools. The number of archive subpools determines whether a single or multiple archive is created.

Each list will be archived in all archive subpools of the corresponding archive pool.

The archive subpools of an archive pool can use the same or different archive media and they can have the same or different archive retention periods.

When does archiving take place?

The Adabas Audit Data Retrieval archive batch utility archives all lists that have been marked for archiving. Archiving takes place at the next run of the archive batch utility and is independent of the remaining online retention period of the list.

A list to be archived has the archive status **Pend**. After the list has been archived successfully, the archive status of this list is changed to **Yes**.

The archive batch utility should run as part of the regular Adabas Audit Data Retrieval daily maintenance. The job should run before the Adabas Audit Data Retrieval cleanup jobs.

Grouping lists for archiving

Each list is assigned to an archive pool at the run time of the archive batch utility and is then archived in all subpools pertaining to this archive pool. Assigning lists to archive pools is based on the following three criteria:

- Archive retention period
- Archive media
- Owner

Matching archive pool

In order for the archive pool to come into question for the assignment, it must fulfill the following conditions:

- The archive pool definition has the **same archive medium** as the list.
- The archive pool definition has the **same owner** as the list.
- The archive pool definition has the **same or a higher archive retention period** as the list.

If several archive pool definitions fulfill these conditions, the list is assigned to the archive pool whose archive retention period matches best.

The list will be archived in all archive subpools pertaining to the best matching archive pool.

Assigning lists to archive pools

The archive batch utility assigns a list having a given archive retention period and archive medium to an archive pool as follows:

- First, it tries to assign the list to an archive pool having the same archive retention period, the same archive medium, and the same owner.
- If this is not possible, it tries to assign the list to the archive pool having the same archive medium, the same owner, and the next higher archive retention period.
- If this is not possible, the list is not assigned to any archive pool and the archive status of the list remains **Pend** (Archive pending). The archive batch utility sets RC=8, and includes the name of the list in the error log.

Archive expiration date

The archive expiration date results from:

- The date of the archive run
- The archive retention period of the list
- The start date entered in the archive subpool (optional)

Examples:

- A list to be archived, which has an archive retention period of 1095 days, is archived in an archive subpool on 26.9.2018. The list receives the archive expiration date 25.9.2021.
- A list to be archived, which has an archive retention period of 1095 days, is archived in an archive subpool on 26.9.2018. It is determined in the archive pool that the calculation is made on the basis of the start date 01.01. The list receives the archive expiration date 31.12.2021.

Valid archive pool and subpool definitions

After program start, the archive batch utility checks the validity of all archive pool definitions.

The following must be true for an archive pool definition to be valid:

- The archive pool has at least one subpool whose archive retention period and archive medium is identical to the archive retention period and archive medium of the archive pool.
- If the archive pool has additional archive subpools, the archive retention period of these archive subpools may not be longer than the archive retention period of the archive pool.

If one of these conditions is not true, the corresponding archive pool definition is invalid and the archive batch utility does the following:

- If no lists are assigned to this invalid archive pool, the archive batch utility sets RC=4 and logs the invalid archive pool.
- If any lists are assigned to this invalid archive pool, the archive batch utility sets RC=8. The lists assigned to this archive pool are **not** archived during this run of the archive batch utility and they keep the archive status **Pend** (archive pending). The archive batch utility logs the invalid archive pool and the names of the lists.

Rules for archiving to tape and optical disk

The following rules will ensure that the data of different customers will be archived on separate media and will prevent the fragmentation of archive media after individual archive datasets have expired.

The following applies when archiving to tape and optical disk:

- Only archive datasets of one subpool will be written to one volume.

In addition, the following applies when archiving to optical disk:

- Only archive datasets of the same owner will be written to one platter.

Reloading concept

Reloading archived data automatically	<p>When you retrieve and display information from an indexed list and the list or its indexes are no longer online, Adabas Audit Data Retrieval automatically reloads the required data from the archive.</p> <p>The query panel displays for each field whether the corresponding index is online or not.</p>
Which data is automatically reloaded?	<p>When you are searching a list whose indexes are offline, all indexes required for the query are reloaded from the archive.</p> <p>When you are browsing pages or hit pages, Adabas Audit Data Retrieval will not reload the entire list. Instead, it will reload only a 4-MB block of data containing the page to be displayed.</p>
Reloading archived data manually	<p>Automatic reloading may lead to repeated mounts of the same archive volume, namely:</p> <ul style="list-style-type: none">• When a list has several indexes and users specify several searches each involving different indexes• When users are displaying several pages of a list and these pages are located in different 4-MB blocks of data <p>Under these circumstances, it may be more effective to reload the entire list manually in order to reduce the number of mounts.</p> <p>A manual reload for the list is carried out by entering the line command R in front of the list. This command creates a reload request (see "Displaying and deleting reload requests" on page 117). The list is actually reloaded at the next run of the reload batch utility. For more information, see "B97RLD: Reload batch utility" on page 305 and the <i>Adabas Audit Data Retrieval User Guide</i>.</p>
Where is the data reloaded to?	<p>When data is reloaded automatically, indexes are reloaded to the Adabas Audit Data Retrieval index spool and 4-MB blocks of data are reloaded to the Adabas Audit Data Retrieval cache spool.</p> <p>When data is reloaded manually, indexes are reloaded to the Adabas Audit Data Retrieval index spool and lists are reloaded to the Adabas Audit Data Retrieval online spool.</p>
Automatic reload from archive when searching	<p>When you want to search a list:</p> <ol style="list-style-type: none">1. Adabas Audit Data Retrieval checks whether all indexes to be searched are present in the index spool. If yes, Adabas Audit Data Retrieval carries out the search.2. If one or several indexes are not in the index spool, Adabas Audit Data Retrieval reloads the index(es) from the archive and carries out the search.

Automatic reload from archive when browsing

When you want to display a page of a list:

1. Adabas Audit Data Retrieval checks whether this page is present in the online spool.
If yes, the page will be displayed.
2. If the page is not in the online spool, Adabas Audit Data Retrieval checks whether the page is in the cache spool.
If yes, the page will be displayed.
3. If the page is not in the cache spool, Adabas Audit Data Retrieval will reload the 4-MB block of data containing the page from the archive to the cache spool and then display the page.

Automatic reload when using background search

When you start a query and at least one of the required indexes is offline, Adabas Audit Data Retrieval offers the following options:

- You can start the search immediately.
The disadvantage of this method is that the screen remains locked until the number of hits is displayed.
- You can trigger the reloading of all required data without starting the search immediately.

The advantage of this method is that you can continue to use your screen after submitting the query while Adabas Audit Data Retrieval reloads the required indexes to the index spool and the 4-MB block containing the first hit page to the cache spool. To display the hits of the search, just repeat the search at a later point in time.

Which archive dataset is used for reloading?

If a list has been archived more than once, the availability of the archive datasets (retention period and status **Good/Bad**) and the reload order specified in the definitions determines which archive dataset is used for reloading.

If the **Order for Reload** field in the archive pool definition specifies **ASIS** (as is), lists and indexes are reloaded from the archive dataset whose archive subpool has the lowest value in its **Order for Reload** field. If this archive dataset is no longer available or if accessing this dataset leads to an error, the data is reloaded from the archive dataset(s) of the archive subpool with the next higher reload order.

If the **Order for Reload** field in the archive pool definition specifies a numeric value, lists and indexes are reloaded from the archive dataset whose archive subpool has this value in its **Order for Reload** field.

Defining archive pools and archive subpools

Overview

Each archive pool definition requires an archive subpool definition that has the same archive medium and the same archive retention period as the archive pool. To ensure this, Adabas Audit Data Retrieval automatically requests the definition of a matching archive subpool when you insert a new archive pool definition.

Optionally, you can insert additional subpools after having defined the archive pool and the first archive subpool. The following applies to these additional subpools.

- The subpool may use any archive medium.
- The archive retention period of the subpool may be the same or lower than the archive retention period of the corresponding archive pool, but not longer.

Note

This section contains a procedural description of how to define archive pools and archive subpools. For more information on the fields you have to specify in these definitions, see these sections:

- "Archive pool definitions" on page 131
- "Archive Subpool Definition panel (tape)" on page 134
- "Archive Subpool Definition panel (disk)" on page 136
- "Archive Subpool Definition panel (optical disk)" on page 138
- "Archive Subpool Definition panel (Centera)" on page 140

Defining a new archive pool and subpool

To define a new archive pool and the first subpool:

1. From the Primary Selection Menu, choose option **A.1**.
2. Enter selection criteria in the displayed panel.

This displays a table containing all matching archive pools.

If there are no matching archive pools, this will display the Archive Pool Definition panel. In this case, proceed with step 4.

3. Enter line command **I** in front an archive pool definition.

This will display the Archive Pool Definition panel.

4. Enter the required values in this panel (see panel description in "Archive pool definitions" on page 131) and press ENTER.

This will display the Archive Subpool Definition panel.

5. Enter the following in this panel:
 - The archive medium
 - A value between 1 and 99 indicating which archive subpool should be tried first, second, etc. when reloading; use each value only once for the subpools of one archive pool.

This will display the Archive Subpool Definition panel for the specified archive medium. The fields in this panel will vary slightly depending on the archive medium. You can find their descriptions in:

- "Archive Subpool Definition panel (tape)" on page 134
 - "Archive Subpool Definition panel (disk)" on page 136
 - "Archive Subpool Definition panel (optical disk)" on page 138
 - "Archive Subpool Definition panel (Centera)" on page 140
6. Enter values in the displayed panel and press ENTER to save your changes.

Defining additional subpool for existing archive pool

To define additional archive subpools for an existing archive pool:

1. From the Primary Selection Menu, choose option **A.1**.
2. Enter selection criteria in the displayed panel.
This displays a table containing all matching archive pools.
3. Enter line command **A** in front of the archive pool definition.
This will display a table containing all archive subpool definitions of this archive pool.
4. Enter line command **I** in front of any archive subpool definition.
This will display the Archive Subpool Definition panel.
5. Enter the following in this panel:
 - The archive medium
 - A value between 1 and 99 indicating which archive subpool should be tried first, second, etc. when reloading; use each value only once for the subpools of one archive pool.

This will display the Archive Subpool Definition panel for the specified archive medium. The fields in this panel will vary slightly depending on the archive medium. You can find their descriptions in:

- "Archive Subpool Definition panel (tape)" on page 134
 - "Archive Subpool Definition panel (disk)" on page 136
 - "Archive Subpool Definition panel (optical disk)" on page 138
 - "Archive Subpool Definition panel (Centera)" on page 140
6. Enter values in the displayed panel and press ENTER to save your changes.

Error message "Duplicate Key" when defining an archive pool

When you define an archive pool, the following values must be unique:

- Combination of archive-medium, archive retention period, and owner
To ensure that there is only one best-matching archive pool for each list, the combination of archive medium, archive retention period, and owner must be unique.

If the error message "Duplicate Key" is displayed when you define an archive pool, press PF1. This will display the name of the archive pool definition which already uses this combination.

**Error message
"Duplicate Key" when
defining an archive
subpool**

When you define an archive subpool, the following values must be unique:

- Reload order (all archive subpools of **this** archive pool)
- Prefix for dataset name (all archive subpools of **all** archive pools)

To ensure that the names of archive datasets are unique, each prefix may only be used once.

If the error message "Duplicate Key" is displayed when you define an archive subpool, press PF1 to display information on the definition which already uses this key.

```

PE97AS15 ----- Duplicate key
Command ==> _____

Insert Archive Subpool Definition

Archive Pool Name      : QI#0004      Archive Product   : B97
Archive Media Name     : ODISK       Archive Pool Owner : CUST001

Subpool is active      ==> YES        (Y)es,(N)o
Order for Reload       ==> 2.         (1-99)
Archive Retention Period ==> 03660    (1-36500) Days
Compress Index         ==> YES        (Y)es,(N)o
Prefix for Data Set Name ==> BETA97.ARCHD4.....

Unit                   ==> /F010...
Expiration Date 98000  ==> No_      (Y)es,(N)o

Storage Class          ==> _____
Data Class             ==> _____
+-----+
| MEIRD017 - ADSI002: ADSDSNP=BETA97.ARCHD4 |
| (ARCPOOL=QI#D004 , ARCPROD=B97, ADSORDER=00003) |
+-----+
    
```

In this example, the prefix BETA97.ARCHD4 is rejected because it is already used in the archive pool definition QI#D004 (ARCPOOL=QI#D004), namely in the archive subpool definition that has the value "Reload Order = 3" (ADSORDER=00003).

Archive pool definitions

Navigation

From the "Primary Selection Menu" choose:

- Option A.1

The "Select Archive Pool Definitions" panel is displayed, where you can specify your selection criteria.

Note: This section contains a description of the "Archive Pool Definition" panel. You can find detailed procedural descriptions on defining archive pools and archive subpools in "Defining archive pools and archive subpools" on page 127.

Archive Pool Definition panel

```

PE97AP10 -----
Command ==> _____

Insert Archive Pool Definition

Archive Pool Name ==> DEEPARC.

Archive Ret. Pd.   ==> 03650      (1-36500) Days
Archive Media Name ==> ODISK      (T)ape, (D)isk, (O)disk, (C)entera

Archive Pool Owner ==> CUST001_
Archive Pool Title ==> DEEP ARCHIVE ON OPTICAL DISK _____

Calculate Expiration Date by Start Date ==> NO__      (Y)es, (N)o
Start Date          ==> _____      (MM/DD)

Order for Reload    ==> ASIS      Value (1-99), (A)sis

Press the ENTER key to insert the archive pool definition.
Press the END key to return to the previous panel.
    
```

Fields

Field	Description
Archive Pool Name	Identifying name (max. 8 characters; the first character must be alphabetic) The combination of archive pool name and owner must be unique.
Archive Ret. Pd.	Archive retention period in days Note: To ensure that there is only one best-matching archive pool for each list, the combination of archive medium, archive retention period, and owner must be unique. If several archive pools have the same owner and archive medium, these archive pools must have different archive retention periods.

Field	Description
Archive Media Name	Legal values are: <ul style="list-style-type: none"> • Tape • Disk (DASD) • Odisk (optical disk) • Ctera (Centera)
Archive Pool Owner	The owner is used for security and archiving. Security: The owner is passed to the security exit and can be used for defining security profiles (optional; max. 8 characters). Archiving: To be assigned to an archive pool, the owner of the pool definition and the owner of the list definition must be identical.
Archive Pool Title	Descriptive title (max. 50 characters)
Calculate Expiration Date by Start Date	Controls the basis on which the calculation of the archive expiration date takes place: <p>No Date of the archive run (default)</p> <p>Yes Next date according to your input in the Start Date field</p>
Start Date	Start date for the calculation of the archive expiration date (day and month according to your date mask) Example: <ul style="list-style-type: none"> • Date of the archive run = 2018-10-29 • Start Date = 01-01 • Calculate Expiration Date by Start Date = Yes • Archive Ret. Pd. = 365 days Result: Archive Expiration Date = 2019-12-31
Order for Reload	Determines the order in which the subpools of this archive pool are accessed when data is reloaded The default value for this field is ASIS (as is), which means that the entry in the Order for Reload field in the subpool definition determines the reload order. To change the default reload order, enter a numeric value between 1 and 99 to direct all reload requests to the subpool whose reload order corresponds to this value. For more information, see "Example: Overriding default order for reload" on page 150.

Archive subpool definitions

Navigation

To navigate to the archive subpool definitions of an archive pool:

1. From the Primary Selection Menu, choose option **A.1**.
2. Type selection criteria in the displayed panel and press ENTER.
3. Enter line command **A** in front of the archive pool definition.

Adabas Audit Data Retrieval branches automatically to the definition of the first archive subpool when you define a new archive pool.

Panel descriptions

The following sections describe the fields of the "Archive Subpool Definition" panels for the corresponding archive medium:

- "Archive Subpool Definition panel (tape)" on page 134
- "Archive Subpool Definition panel (disk)" on page 136
- "Archive Subpool Definition panel (optical disk)" on page 138
- "Archive Subpool Definition panel (Centera)" on page 140

You can find detailed procedural descriptions on defining archive pools and archive subpools in "Defining archive pools and archive subpools" on page 127.

Archive Subpool Definition panel (tape)

Archive Subpool Definition panel (tape)

```

PE97AS11 -----
Command ==> _____

Insert Archive Subpool Definition

Archive Pool Name       : QI#D004       Archive Product   : B97
Archive Media Name     : TAPE           Archive Pool Owner : CUST001

Subpool is active      ==> YES           (Y)es,(N)o
Order for Reload       ==> 1.           (1-99)
Archive Retention Period ==> 3660.      (1-36500) Days
Compress Index         ==> YES           (Y)es,(N)o
Prefix for Dataset Name ==> BETA97.ARCHT4.....

Unit                   ==> CASS....

New tape each archive run ==> NO_       (Y)es,(N)o

Compression            ==> IGNORE       (Y)es,(N)o,(I)gnore

Press the ENTER key to insert the definition.
Press the END key to return to the previous panel.
    
```

Fields (tape)

Field	Description
Subpool is active	Controls whether this archive subpool is used during the archive run (Yes) or not (No)
Order for Reload	Numeric value determining the order in which the archive subpools assigned to this archive pool will be accessed when data is reloaded from the archive Legal values are 1 (highest) through 99 (lowest). The default reload order defined in the subpool definitions can be overridden in the archive pool definition. For more information, see "Example: Overriding default order for reload" on page 150.
Archive Retention Period	Archive retention period in days (max. 36500)
Compress Index	Yes to archive indexes in compressed format (reduces archive space and number of IOs, but increases CPU consumption)
Prefix for DSname	Prefix for archive datasets (max. 32 characters) Important: In order to make archive dataset names unique, the prefix has been defined as a key in the Adabas Audit Data Retrieval database. If you try to enter a prefix that is already in use in another subpool definition (same or different archive pool), this value will be rejected. For more information on archive dataset names, see "Archive dataset names" on page 144.
Unit	Tape unit (esoteric, generic, or device name)

Field	Description
New tape each archive run	Yes to request a new tape for each archive run No to continue using a tape during subsequent archive runs until it is full
Compression	Yes to use IDRC compression No to write without compression Ignore to use the default settings of the tape unit

Archive Subpool Definition panel (disk)

Archive Subpool Definition panel (disk)

```

PE97AS13 -----
Command ==> _____

Insert Archive Subpool Definition

Archive Pool Name       : QI#D004      Archive Product   : B97
Archive Media Name     : DISK         Archive Pool Owner : CUST001

Subpool is active      ==> YES         (Y)es, (N)o
Order for Reload       ==> 1.         (1-99)
Archive Retention Period ==> 90...    (1-36500) Days
Compress Index         ==> YES        (Y)es, (N)o
Prefix for Dataset Name ==> BETA97.ARCHD4.....

Data Set Size          ==> 5000.      (200-65535) Tracks

Storage Class          ==> _____
Data Class             ==> _____
Management Class      ==> _____

Press the ENTER key to insert the definition.
Press the END key to return to the previous panel.
    
```

Fields (disk)

Field	Description
Subpool is active	Controls whether this archive subpool is used during the archive run (Yes) or not (No)
Order for Reload	Numeric value determining the order in which the archive subpools assigned to this archive pool will be accessed when data is reloaded from the archive Legal values are 1 (highest) through 99 (lowest). The default reload order defined in the subpool definitions can be overridden in the archive pool definition. For more information, see "Example: Overriding default order for reload" on page 150.
Archive Retention Period	Archive retention period in days (max. 36500)
Compress Index	Yes to archive indexes in compressed format (reduces archive space and number of IOs, but increases CPU consumption)
Prefix for DSname	Prefix for archive datasets (max. 32 characters) Important: In order to make archive dataset names unique, the prefix has been defined as a key in the Adabas Audit Data Retrieval database. If you try to enter a prefix that is already in use in another subpool definition (same or different archive pool), this value will be rejected. For more information on archive dataset names, see "Archive dataset names" on page 144.

Field	Description
Data Set Size	Dataset size in tracks (200 - 65535); this value should be a multiple of 128. At the end of the archive run, unused space is released when archiving to DASD.
Storage Class / Data Class / Management Class	Entries for SMS Note: Archiving to disk requires SMS.

Archive Subpool Definition panel (optical disk)

Archive Subpool Definition panel (optical disk)

```

PE97AS15 -----
Command ==> _____

Insert Archive Subpool Definition

Archive Pool Name       : QI#0004      Archive Product   : B97
Archive Media Name     : ODISK        Archive Pool Owner : CUST001

Subpool is active      ==> YES         (Y)es,(N)o
Order for Reload       ==> 2.         (1-99)
Archive Retention Period ==> 3660.    (1-36500) Days
Compress Index         ==> YES        (Y)es,(N)o
Prefix for Dataset Name ==> BETA97.ARCH04.....

Unit                   ==> /F010...
Expiration Date 98000  ==> No_       (Y)es,(N)o

Storage Class          ==> _____
Data Class             ==> _____
Management Class      ==> _____

Press the ENTER key to insert the definition.
Press the END key to return to the previous panel.
    
```

Fields (optical disk)

Field	Description
Subpool is active	Controls whether this archive subpool is used during the archive run (Yes) or not (No)
Order for Reload	Numeric value determining the order in which the archive subpools assigned to this archive pool will be accessed when data is reloaded from the archive Legal values are 1 (highest) through 99 (lowest). The default reload order defined in the subpool definitions can be overridden in the archive pool definition. For more information, see "Example: Overriding default order for reload" on page 150.
Archive Retention Period	Archive retention period in days (max. 36500)
Compress Index	Yes to archive indexes in compressed format (reduces archive space and number of IOs, but increases CPU consumption)
Prefix for DSname	Prefix for archive datasets (max. 32 characters) Important: In order to make archive dataset names unique, the prefix has been defined as a key in the Adabas Audit Data Retrieval database. If you try to enter a prefix that is already in use in another subpool definition (same or different archive pool), this value will be rejected. For more information on archive dataset names, see "Archive dataset names" on page 144.
Unit	Esoteric, generic, or device name

Field	Description
Expiration date 98000	<p>When using optical disks in 3490 mode, it may be necessary to work with the expiration date 98000 (foreign/external) to prevent the tape management system from controlling volume allocation. If in doubt, please contact your tape librarian or storage administrator.</p> <p>No to assign the regular expiration date to archive datasets according to the archive retention period</p> <p>Yes to assign the expiration date 98000 (foreign) to archive datasets written to this unit in order to bypass your tape management system when allocating volumes on this unit</p>
Storage Class / Data Class / Management Class	Entries for SMS managed datasets

Archive Subpool Definition panel (Centera)

Archive Subpool Definition panel (Centera)

```

PE97AS17 -----
Command ==> _____

Insert Archive Subpool Definition    Last Update:

Archive Pool Name      : QI#0005      Archive Product   : B97
Archive Media Name     : CTERA        Archive Pool Owner : CUST001

Subpool is active      ==> YES        (Y)es, (N)o
Order for Reload       ==> 04         (1-99)
Archive Retention Period ==> 3660.    (1-36500) Days
Compress Index         ==> YES        (Y)es, (N)o
Prefix for Dataset Name ==> BETA97.ARCHC5.....

CONNECT Parameter Suffix ==> SUFF001.

Press the ENTER key to insert the definition.
Press the END key to return to the previous panel.
    
```

Fields (Centera)

Field	Description
Subpool is active	Controls whether this archive subpool is used during the archive run (Yes) or not (No)
Order for Reload	Numeric value determining the order in which the archive subpools assigned to this archive pool will be accessed when data is reloaded from the archive Legal values are 1 (highest) through 99 (lowest). The default reload order defined in the subpool definitions can be overridden in the archive pool definition. For more information, see "Example: Overriding default order for reload" on page 150.
Archive Retention Period	Archive retention period in days (max. 36500)
Compress Index	Yes to archive indexes in compressed format (reduces archive space and number of IOs, but increases CPU consumption)
Prefix for DSname	A unique and valid prefix for archive datasets (max. 32 characters) Important: The prefix is not used in the dataset name when archiving in a Centera archive. However, a valid prefix must still be entered, as this field is defined as a key in the Adabas Audit Data Retrieval database. If you try to enter a prefix that is already in use in another subpool definition (same or different archive pool), this value will be rejected.

Field	Description
CONNECT Parameter Suffix	Establishes a connection between this archive subpool definition and the connection string to be used, which is defined in the B97LSTxx member (LST parameter B97_CONNECT_TO_CENTERA_ <i>suffix</i>)

Requirements

The IBM Language Environment (LE) and Centera Runtime library are required for archiving on Centera.

The IBM Language Environment (LE) and the Centera Runtime-library are normally defined in the linklist. If this is not the case in your environment, please supplement the library in the following places:

- In the Adabas Audit Data Retrieval started task procedure (default name B97STC)
- In JCL of B97ARC (and/or the respective step of B97DAILY)
- In JCL of B97DEARC (and/or the respective step of B97DAILY)
- Under option **S.2**, page 3 (for JCL generated online)

Optional: Add the dataset or member which contains the Centera environment variables under the DD name BSACFG in the following places:

- In the Adabas Audit Data Retrieval started task procedure (default name B97STC)
- In JCL of B97ARC (and/or the respective step of B97DAILY)
- In JCL of B97DEARC (and/or the respective step of B97DAILY)
- In the skeletons SE97ARCH and SE97ACLN (and/or the respective step of SE97DALY) in the BETA97.ISPSLIB (for JCL generated online)

Adabas Audit Data Retrieval sets the environment variables specified in the dataset or member when archiving in a Centera archive.

LST parameters

The following LST parameters in the B97LSTxx member control archival in the Centera archive and must be added and/or customized, if necessary:

- B97_CONNECT_TO_CENTERA_ *suffix*
- B97_CENTERA_TASKS
- OBJ_RETRIEVAL_DEVICES
- B97_ARC_MAX_NUMBER_OF_OBJECTS

Connection string

When connecting to the Centera archive, Adabas Audit Data Retrieval passes the required parameters in the so-called connection string. The maximum length of the connection string is 256 bytes. The *Centera API Reference Guide* describes the structure of the connection string as well as the parameters which it must contain (IP address, port, userID/password (or PAE-dataset) etc.).

You can store several connection strings in the B97LSTxx member under the keyword B97_CONNECT_TO_CENTERA_ *suffix*. *suffix* is variable and establishes the connection between a specific archive subpool definition and the corresponding connection string.

Example: If an archive subpool definition of the type **CTERA** has the value **SUBPOOL1** in the **CONNECT Parameter Suffix** field, then Adabas Audit Data Retrieval uses the connection string which is defined under the keyword **B97_CONNECT_TO_CENTERA_SUBPOOL1** when reading or writing archive datasets of this subpool.

Characteristics

The following characteristics apply when archiving to a Centera archive:

- The calculated archive retention period is converted into seconds, as required by Centera.

Centera Retention Classes are currently not supported.

- Adabas Audit Data Retrieval stores datasets with a fixed size of 4 MB in the Centera archive. The names of these datasets begin with **AOR.atoken**.

Each Adabas Audit Data Retrieval archive dataset consists of one or more of these 4-MB blocks. The maximum size of an archive dataset can be controlled via the following LST parameter:

B97_ARC_MAX_NUMBER_OF_OBJECTS

- An archive dataset which consists of several blocks can be processed in parallel. The number of parallel activities can be limited with the help of the following LST parameter in the B97LSTxx member:
 - When archiving: B97_CENTERA_TASKS
 - When reloading: OBJ_RETRIEVAL_DEVICES

Note on storage requirements (Region): An additional 5 MB of storage is required for parallel archival. This means for example, B97ARC additionally requires 20 MB of storage when archiving to a Centera archive if you enter B97_CENTERA_TASKS = 4.

- When archiving in a subpool of the type **CTERA** is processed in parallel, the following activities can only be carried out after all 4-MB blocks of an archive dataset have been fully written :
 - Writing the log IRMPRINT for this archive dataset
 - Resetting the archive pending flag of all lists which are stored in this archive dataset

This concerns all archive subpools of the relevant archive pool, independent of its type (Disk, Odisk, Tape or Ctera), if at least one archive subpool is of the type **CTERA**.

This means: If an error causes the archive run to abort, the Archive-Pending flag is not reset for the lists that were already successfully archived in this archive run. The concerned lists are then archived anew in the next archive run. We therefore recommend that you limit the maximum number of 4-MB blocks of the archive datasets with the help of the B97_ARC_MAX_NUMBER_OF_OBJECTS parameter. Note that the maximum number of archive datasets that can be created on a given day is limited to 999.

Error analysis

The LST parameter OBJ_CENTERA_TRACE = YES in the B97LSTxx member causes a detailed log to be written. Use this parameter only during problem resolution after consulting support.

Archive dataset names

Dataset names

Archive dataset names consist of:

1. The prefix defined in the **Prefix for DSname** field
2. The qualifier *Eyyddd* where *yyddd* is the Julian date of the archive run
3. The qualifier *Cnnn* where *nnn* is a three-digit counter which is incremented by 1 for each new archive dataset that is based on this archive subpool definition and written on the same day

Example

The prefix defined in the **Prefix for DSname** field of the archive subpool definition is BETA97.TEST.

The date is January 31, 2019. On this day, the archive datasets written for this archive subpool have these names: BETA97.TEST.E19031.C001, BETA97.TEST.E19031.C002, BETA97.TEST.E19031.C003, etc.

The date is February 1, 2019. On this day, the archive datasets written for this archive subpool have these names: BETA97.TEST.E19032.C001, BETA97.TEST.E19032.C002, BETA97.TEST.E19032.C003, etc.

Notes

- Names of Centera archive datasets begin with AOR.*atoken* instead of the prefix.
- By default, archive dataset copies created by the archive copy batch utility (see page 310) have the qualifier *Knnn* instead of *Cnnn*.

Force archiving on new tape volume

If the archive subpool definition specifies **No** in the **New tape each archive run** field, new archive runs will continue using a tape for the same archive subpool if this tape did not get full during the previous run. You can prevent this for an individual volume by changing the status of this volume.

To force the next archive run to write archive datasets to a new volume:

1. From the Primary Selection Menu, choose option **A.3** to display archive volumes.
2. Enter selection criteria in the displayed panel and press ENTER.
3. Enter line command **S** in front of the last tape volume used by the previous archive run.
4. Type **Yes** in the **Volume Full** field and press ENTER.

Example: Dual archive to tape and disk (DASD)

Overview

This example shows the required definitions for archiving indexed lists to disk (DASD) for 90 days and to tape for 10 years. During the first 90 days, archived lists should be reloaded from disk. After this period they should be reloaded from tape.

Required definitions

The following definitions are required to achieve this:

- One archive pool having a retention period of 10 years on tape
- Two archive subpools assigned to this archive pool
 - One archive subpool for the medium tape having a retention period of 10 years and reload order 2
 - One archive subpool for the medium disk having a retention period of 90 days and reload order 1
- List definitions specifying the same medium, archive retention period, and owner as the archive pool

Archive pool definition

To define an archive pool and the first archive subpool for these lists:

1. From the Primary Selection Menu, choose option **A.1**.
2. In the selection panel, press ENTER to display all existing archive pool definitions.
3. Enter line command **I** in front of any archive pool definition.
4. In the displayed panel, enter the values of your choice.

```

PE97AP10 -----
Command ==> _____

Insert Archive Pool Definition

Archive Pool Name ==> TAPE10..

Archive Ret. Pd. ==> 3660.      Retention period in days (1 - 36500)
Archive Media Name ==> TAPE.    (T)ape,(D)isk,(O)disk,(C)entera

Archive Pool OWNER ==> CUST001_
Archive Pool Title ==> DUAL ARCHIVE POOL DASD 90 DAYS TAPE 10 YEARS_____

Calculate Expiration Date by Start Date ==> NO__      (Y)es,(N)o
Start Date ==> _____      (MM/DD)

Order for Reload ==> ASIS      Value (1-99),(A)sis

Press the ENTER key to insert the archive pool definition.
Press the END key to return to the previous panel.

```

5. Press ENTER to insert the first subpool definition.

This will display the following panel:

```

PE97AS10 -----
Command ==> _____

Insert Archive Subpool Definition

Archive Product      : B97
Archive Pool Name    : TAPE10
Archive Pool Owner   : CUST001

Archive Media Name ==> TAPE.      (T)ape,(D)isk,(O)disk,(C)entera

Order for Reload    ==> 01        (1-99) unique number
                                   within this archive pool

Subpool is active   ==> YES      (Y)es,(N)o

Press ENTER to insert the definition. Press DOWN to display the next page.
Press END key to return to the previous panel.

```

6. Overtyping the displayed value in the **Order for Reload** field with the value **2** and pressing ENTER:

This will display the "Insert Archive Subpool Definition" panel for the archive medium TAPE.

7. In the displayed panel, enter the values of your choice.

```

PE97AP51 -----
Command ==> _____

Insert Archive Subpool Definition

Archive Pool Name      : TAPE10      Archive Product      : B97
Archive Media Name     : TAPE        Archive Pool Owner   : CUST001

Order for Reload       ==> 2.         (1-99)
Archive Retention Period ==> 3660.    (1-36500) Days
Compress Index         ==> YES        (Y)es,(N)o
Prefix for Data Set Name ==> BETA97.TAPE10.....

Unit                   ==> CASS....

New tape each archive run ==> NO_      (Y)es,(N)o
Compression            ==> IGNORE    (Y)es,(N)o,(I)gnore

Press the ENTER key to insert the definition.
Press the END key to return to the previous panel.

```

- Press ENTER to save the archive pool definition and the archive subpool definition, then press PF3 to leave the panel.

This will display the "Display Archive Subpool Definitions" panel.

```

PE97AS05 -----Row          1 of      2
Command ==> _____ Scroll ==> CSR.

Display Archive Subpool Definitions          ( LEFT/RIGHT )

S - Select   I - Insert   C - Copy   D - Delete

Sel  Order Pool      Medium Retpd Dsname Prefix          Owner
    00002 TAPE10     TAPE   03660 BETA97.TAPE10      CUST001
*****          ***** BOTTOM OF DATA *****
    
```

Second archive subpool definition

To insert the second archive subpool definition:

- In the "Archive Subpool Definitions" table, enter line command **I** in front of the archive subpool definition you just inserted.

This will display the following panel:

```

PE97AS10 -----
Command ==> _____

Insert Archive Subpool Definition

Archive Product      : B97
Archive Pool Name    : TAPE10
Archive Pool Owner   : CUST001

Archive Media Name ==> TAPE.      (T)ape,(D)isk,(O)disk,(C)entera
Order for Reload    ==> ..        (1-99) unique number
                                         within this archive pool
Subpool is active   ==> YES       (Y)es,(N)o

Press ENTER to insert the definition. Press DOWN to display the next page.
Press END key to return to the previous panel.
    
```

- Overtyping the value displayed in the **Archive Media Name** field with the value **Disk**, type **1** in the **Order for Reload** field, and press ENTER.

This will display the "Insert Archive Subpool Definition" panel for the archive medium DISK.

- In the displayed panel, type the values of your choice.

```

PE97AS13 -----
Command ==> _____

Insert Archive Subpool Definition

Archive Pool Name      : TAPE10   Archive Product   : B97
Archive Media Name    : DISK     Archive Pool Owner : CUST001

Subpool is active     ==> YES      (Y)es,(N)o
Order for Reload      ==> 1.      (1-99)
Retention Period      ==> 90...   (1-36500) Days
Compress Index        ==> YES     (Y)es,(N)o
Prefix for Data Set Name ==> BETA97.DASD90.....

Data Set Size         ==> 1280.   (200-65535) Tracks

Storage Class         ==> _____
Data Class            ==> _____
Management Class      ==> _____

Press the ENTER key to insert the definition.
Press the END key to return to the previous panel.

```

- Press ENTER to save the definition and then press PF3 to leave this panel.

Note on Order for Reload field

Assigning the reload order **2** to the archive subpool for the archive medium **Tape** and the reload order **1** to the archive subpool for the archive medium **Disk** ensures that archived data will be reloaded from the DASD archive during the first 90 days. After this period, archive data will be reloaded from the tape archive.

List definition

Specify the following in the Adabas Audit Data Retrieval list definition (Option 2.1) for all lists that should be archived according to the above definitions:

- Owner = CUST001
- Automatic Archive = Yes
- Archive Medium = Tape
- Archive Retention Period = 3660

```

PE97LD20 ----- Page 1 of 3
Command ==> _____

Update List/Report Definition      Last Update: B97USER 02/18/2008 10:09:04

Form          : REJ
Extension     : TRADE
Report        :

Owner         ==> CUST001_
Sec-Level    ==> _____
Title        ==> _____

To extract a list date from the list data, specify the following values:
Line         ==> 0006   Column ==> 00059   Format ==> MM/DD/YYYY
Number of Lines ==> 0001

Press ENTER to update the definition. Press DOWN to display the next page.
Press END to return to the previous panel.

```

```

PE97LD21 ----- Page 2 of 3
Command ==> _____

Update List/Report Definition      Last Update: B97USER 02/18/2008 10:09:04

Form: REJ          Extension: TRADE          Report:

Archive Processing Parameters :

Automatic Archive      ==> YES          (Y)es,(N)o
Archive Medium         ==> TAPE        (T)ape,(D)isk,(O)disk,(C)en-
Archive Retention Period ==> 3660_     (1-36500) Days      tera

Online Processing Parameters :

Online = Archive Expiration Date ==> NO.          (Y)es,(N)o

Online Retention Period      ==> 00030   (1-36500) Days
Index Retention Period      ==> 00030   (1-36500) Days

Press ENTER to update the definition. Press DOWN to display the next page, or
UP to display the previous page. Press END to return to the previous panel.

```

Example: Overriding default order for reload

Overview

The order in which archive media are accessed when reloading data from the archive is determined by the following:

- Value in the **Order for Reload** field in the **archive pool** definition
- Value in the **Order for Reload** field in the **subpool** definition

This example shows how you can change the order in which archive media are accessed when data is reloaded to the cache, index or online spool.

Subpool definitions

The archive pool has the following three subpool definitions:

Subpool	Medium	Retention period	Reload order
SUBPOOLA	Disk	90	1
SUBPOOLB	Optical Disk	9999	2
SUBPOOLC	Tape	9999	3

Default reload order

By default, the **archive pool** definition specifies **ASIS** (as is) in the **Order for Reload** field, which means that the entries in the **Order for Reload** field in the **subpool** definition determine the order in which subpools are accessed for reloading. In this example:

In this example, the following applies:

1. First, Adabas Audit Data Retrieval checks whether the data can be reloaded from disk (SUBPOOLA).
2. If this is not possible (for example, because these datasets have already expired), Adabas Audit Data Retrieval tries to reload the data from optical disk (SUBPOOLB).
3. If this is not possible (for example, because the corresponding device is not available), Adabas Audit Data Retrieval tries to reload the data from tape (SUBPOOLC).

Changing reload order

If the optical disk device is temporarily unavailable, the reloading of all older lists from this archive pool will lead to an error and to the automatic generation of a second reload request from tape (SUBPOOLC). To prevent these errors from happening repeatedly, you can change the reload order and redirect all reload requests for this archive pool to SUBPOOLC.

To redirect all reload requests to SUBPOOLC, enter **3** in the **Order for Reload** field in the archive pool definition. (This modification also applies to reload request for lists that are younger than 90 days and are therefore still available on disk.)

After the optical disk device has become available again, change the value in the **Order for Reload** field in the archive pool definition back to **ASIS** to make Adabas Audit Data Retrieval use the default reload order.

Note

If you direct all reload requests of an archive pool to one archive subpool, there is no automatic generation of reload requests for other subpools if one reload request fails.

Displaying archive information

- Overview** The Adabas Audit Data Retrieval ISPF application offers several ways of accessing the display of information on archive datasets and archive volumes.
- Archive datasets** The Archive Dataset table and the Archive Dataset Information panel display information on archive datasets.
For a description of the displayed information, see "Archive Dataset Information panel" on page 154.
- Navigation** You can access this information directly using Option **A.2** (DATASETS). Alternatively, you can also access the "Display Archive Datasets" table and the "Display Archive Dataset Information" panel these ways:
- Via option **A.3** (VOLUMES):
 - Enter the line command **A** in front of a volume to display the archive datasets on this volume.
 - Via option **4.4** (DEVICES):
 1. Enter the line command **V** in front of a device to display the archive volumes of this device.
 2. Enter the line command **A** in front of a volume to display the archive datasets on this volume.
- Lists archived in archive dataset** You can use the line command **L** (archived lists) in front of an archive dataset to display the lists archived in this dataset.
For more information, see "Lists contained in archive dataset" on page 161.
- Archive dataset group** All archive datasets created for one archive pool during one archive run are marked internally with the same unique token. You can use the line command **A** (Archive dataset group) in front of a dataset to display all datasets having the same token.
For more information, see "Archive Dataset Group table" on page 159.

Archive volumes

You can use option **A.3** (VOLUMES) to display active archive volumes that are available for future archive runs. For a description of the displayed information, see "Archive Volume Information panel" on page 157.

You can use option **A.4** (DEVICES) to display archive volumes that have been assigned to a given device. You can do this by displaying the "Display Archive Device Definitions" table and then entering the line command **V** in front of a device. For a description of the displayed information, see "Archive volumes of a device" on page 167.

Under option **A.2** (DATASETS) you can specify the archive volume as a selection criterion. The "Display Archive Dataset Information" panel will display on which volume the archive dataset is stored.

Archive Dataset Information panel

Navigation

From the "Primary Selection Menu" choose:

- Option **A.2**
The "Select Archive Datasets" panel is displayed, where you can specify your selection criteria.

Alternative navigation

- Option **A.3 (VOLUMES)**, then line command **A** in Archive Volume table
- Option **A.4 (DEVICES)**, then line command **V** in Archive Device Definitions table, then line command **A** in Archive Volume table
- Option **1 (BROWSE)**, then line command **AG** in the List/Report Selection table

Archive Datasets table

```

PE97AG05 ----- Row          1 of 176
Command ==> _____ Scroll ==> CSR_

Display Archive Datasets                               Page 1 of 3
                                                         ( LEFT/RIGHT )

  S - Select      A - Archive Dataset Group      L - Lists

Sel  Dataset Name                                Created   Expire    Retpd
     BETA97.TAPE365.CASS.E04148.C001            05/27/2004 05/27/2005 00365
     BETA97.TAPE365.CASS.E04149.C001            05/28/2004 05/28/2005 00365
     BETA97.TAPE365.CASS.E04149.C002            05/28/2004 05/28/2005 00365
     BETA97.TAPE365.CASS.E04149.C003            05/28/2004 05/28/2005 00365
     BETA97.TAPE365.CASS.E04149.C004            05/28/2004 05/28/2005 00365
     BETA97.TAPE365.CASS.E04149.C005            05/28/2004 05/28/2005 00365
     BETA97.TAPE365.CASS.E04149.C006            05/28/2004 05/28/2005 00365
     BETA97.TAPE365.CASS.E04149.C007            05/28/2004 05/28/2005 00365
     BETA97.TAPE365.CASS.E04149.C008            05/28/2004 05/28/2005 00365
     BETA97.TAPE365.CASS.E04153.C001            06/01/2004 06/01/2005 00365
     BETA97.TAPE365.CASS.E04153.C002            06/01/2004 06/01/2005 00365
     BETA97.TAPE365.CASS.E04153.C003            06/01/2004 06/01/2005 00365
     BETA97.TAPE365.CASS.E04155.C001            06/03/2004 06/03/2005 00365
     BETA97.TAPE365.CASS.E04156.C001            06/04/2004 06/04/2005 00365
     BETA97.TAPE365.CASS.E04159.C001            06/07/2004 06/07/2005 00365
     BETA97.TAPE365.CASS.E04160.C001            06/08/2004 06/08/2005 00365
    
```

Archive Dataset Information panel (Page 1)

```

PE97AG20 ----- Page 1 of 2
Command ==> _____

Display Archive Dataset Information Last Update:

Archive Dataset Name      : BETA97.TAPE365.CASS.E04148.C001
Archive Pool Name        : TAPE365
Owner                    : CUST001

Archive Information
Archive Medium           : TAPE
Archive Volume           : H00735      Archive Unit   : IBMXT
Archive File Sequence No : 0001

Archive Date             : 05/27/2004   Archive Time   : 10:40:44:11
Archive Retention Period : 00365      Days
Archive Expiration Date  : 05/27/2005

Archive Order for Reload : 00002

Press DOWN to display the next page.
Press END to return to the previous panel.
    
```

Fields (Page 1)

Field	Description
Archive Dataset Name	For more information on the structure of archive dataset names, see "Archive dataset names" on page 144.
Archive Pool Name	Name of the archive pool
Owner	Owner (taken from the archive pool definition)
Archive Medium	DISK, TAPE, ODISK (optical disk), or CTERA (Centera)
Archive Volume	Volume serial number of archive volume
Archive Unit	Esoteric, generic, or device name
Archive File Sequence No	File sequence number (label) of archive dataset on tape volume (if archive medium is tape)
Archive Date/Time	Creation date and time of the archive dataset
Archive Retention Period	Retention period in days (taken from the archive subpool definition) Note: An asterisk (*) is displayed next to the archive retention period if the archive expiration date has been modified after the original archive run. For more information, see "B97AXPDT: Archive expiration date batch utility" on page 232.
Archive Expiration Date	Expiration date of archive dataset
Archive Order for Reload	Reload order between 1 (highest) and 99 (lowest) (taken from the archive subpool definition)

Archive Dataset Information panel (Page 2)

```

PE97AG21 ----- Page 2 of 2
Command ==> _____

Update Archive Dataset Information Last Update:

Archive Dataset Name      : BETA97.TAPE365.CASS.E04148.C001
Archive Pool Name        : TAPE365
Owner                    : CUST001

Internal Information
Archive Token             : BB47511A7D054982
Archive Sequential Number : 0001

Archive Catalog           : YES
Archive Dataset Status    ==> GOOD. (G)ood,(B)ad

Press ENTER to update the definition. Press UP to display the previous page.
Press END to return to the previous panel.
    
```

Fields (Page 2)

Field	Description
Archive Dataset Name	For more information on the structure of archive dataset names, see "Archive dataset names" on page 144.
Archive Pool Name	Name of the archive pool
Owner	Owner (taken from the archive pool definition)
Archive Token/Archive Sequential Number	Internal, unique identifier used for this archive dataset
Archive Catalog	Always Yes (all archive datasets are cataloged)
Archive Data Set Status	Good means the dataset is okay and will be used when reloading data from the archive. If an error occurs because an archive dataset cannot be accessed, assign status Bad to this dataset to make Adabas Audit Data Retrieval use a different archive dataset (if available).

Archive Volume Information panel

Overview

You can use the Archive Volume table to display archive volumes that are available for future archive runs.

The table displays only volumes that have not been marked as full (the value in the **Volume Full** field is **No**).

Navigation

From the "Primary Selection Menu" choose:

- Option **A.3**

The "Select Archive Volumes" panel is displayed, where you can specify your selection criteria.

Alternative navigation

- Option **A.4 (DEVICES)**, then line command **V** in Archive Device Definitions table

Archive Volumes table

```

PE97AV05 ----- Row          1 of      13
Command ==> _____ Scroll ==> CSR_

Display Archive Volumes                               Page 1 of 2
                                                    ( LEFT/RIGHT )

  S - Select      A - Archive Datasets

Sel  Volume Medium Unit   File# Order Full Expire      Pool   Owner
BOF005 ODISK  /F010   00003 00000 NO   09/19/2005  QI#D004 QDOC
BOF006 ODISK  /F010   00000 00000 NO                   QI#D004 QDOC
H01441 TAPE   ROBO    00003 00001 NO   09/20/2005  QI#D004 QDOC
H01442 TAPE   ROBO    00003 00003 NO   09/19/2005  QI#D004 QDOC
BOF001 ODISK  /F010   00017 00001 NO   11/04/2005  QI#0050 QDOC
BOF002 ODISK  /F010   00000 00001 NO                   QI#0050 QDOC
H00016 TAPE   ROBO    00017 00002 NO   09/26/2005  QI#T010 QDOC
H00568 TAPE   ROBO    00001 00001 NO   09/23/2005  QI#T010 QDOC
H00569 TAPE   ROBO    00001 00003 NO   09/20/2005  QI#T010 QDOC
H00777 TAPE   ROBO    00012 00004 NO   09/25/2005  QI#T010 QDOC
H00026 TAPE   ROBO    00023 00002 NO   12/29/2005  QI#T105 QDOC
H00778 TAPE   ROBO    00015 00001 NO   12/30/2005  QI#T105 QDOC
H00030 TAPE   ROBO    00016 00001 NO   01/31/2028  QI#T999 QDOC
***** BOTTOM OF DATA *****
    
```

Archive Volume Information panel

```

PE97AV20 -----
Command ==> _____

Update Archive Volume Information   Last Update:

Archive Pool Name      : QI#T010      Product Name   : B97
Owner                  : QDOC

Volume Serial Number   : H00777      Unit Type      : ROBO
File(s) on Medium      : 00012

Archive Medium         : TAPE
Prefix for Data Set Name : QAB97.ROB05C
Expiration Date        : 12/31/2005

Volume Full            ==> NO..      (Y)es, (N)o

Archive Order for Reload : 00002

Press the ENTER key to update the archive volume definition.
Press the END key to return to the previous panel.
    
```

Fields

Field	Description
Archive Pool Name	Name of the archive pool
Product name	Always B97
Owner	Archive pool owner (taken from archive pool definition)
Volume serial number	(self-explanatory)
Unit type	Unit (esoteric, generic, or device; taken from archive subpool definition)
File(s) on Medium	Number of files on this volume
Archive Medium	TAPE, DISK, ODISK, or CTERA (Centera)
Prefix for Data Set Name	Prefix (taken from archive subpool definition) For more information on archive dataset names, see "Archive dataset names" on page 144.
Expiration Date	Volume expiration date
Volume Full	No means that the volume is not full and that additional archive datasets will be appended to this volume during future archive runs. If the New tape each archive run field in the archive subpool definition contains Yes , then each archive run automatically enters Yes in the Volume full field. You can also change the value in this field to Yes manually to force Adabas Audit Data Retrieval to use a new volume (see subsection "Force archiving on new tape volume" in "Archive dataset names" on page 144).
Archive Order for Reload	Reload order between 1 (highest) and 99 (lowest) (taken from archive subpool definition)

Archive Dataset Group table

Archive dataset group All archive datasets created for one archive pool during one archive run are marked internally with the same unique token. You can use the line command **A** (Archive dataset group) in front of a dataset to display all datasets that have the same token.

Navigation To display all datasets of an archive dataset group:

1. From the Primary Selection Menu, choose option **A.2**.
2. Type selection criteria in the displayed panel and press ENTER.
3. Enter line command **A** in front of the archive dataset.

Alternative navigation

- Option **A.3** (VOLUMES), then line command **A** in Archive Volume table, then line command **A** in Archive Datasets table
- Option **A.4** (DEVICES), then line command **V** in Archive Device Definitions table, then line command **A** in Archive Volume table, then line command **A** in Archive Datasets table

Example The two archive subpools DASD90 and TAPE365 have been defined for the archive pool POOL1. The archive run on February 1, 2019, creates these two archive datasets for POOL1:

- The dataset BETA97.TAPE365.E19032.C001 for subpool TAPE365
- The datasets BETA97.DASD90.E19032.C001 and BETA97.DASD90.E19032.C002 for subpool DASD90

These three datasets get the same unique token to mark them as belonging together as members of the same archive dataset group. When you enter the line command **A** in front of any one of these datasets, the three datasets are displayed in the Archive Dataset Group table.

Archive Dataset Group table

```

PE97AG35 ----- Row      1 of      3
Command ==> _____ Scroll ==> CSR_

Display Archive Dataset Group                               Page 1 of 4
                                                           ( LEFT/RIGHT )

  S - Select      L - Lists

Sel  Dataset Name                Created   Expire    Retpd
    QAB97.DASD90.E19032.C001      02/01/2019 05/02/2019 00090
    QAB97.DASD90.E19032.C002      02/01/2019 05/02/2019 00090
    QAB97.TAPE365.E19032.C001      02/01/2019 01/02/2020 00365
***** BOTTOM OF DATA *****
    
```

Fields

Field	Description
Archive Dataset Name	For more information on the structure of archive dataset names, see "Archive dataset names" on page 144.
Pool	Name of the archive pool
Medium	TAPE, DISK, ODISK, or CTERA (Centera)
Order	Reload order between 1 (highest) and 99 (lowest)
SeqNr	Sequence number of archive dataset (see also last qualifier of archive dataset name)

Lists contained in archive dataset

Overview

You can use the Archived Lists table to display which lists have been archived in a given archive dataset.

Navigation

To display the lists archived in a given archive dataset:

1. From the Primary Selection Menu, choose option **A.2**.
2. Type selection criteria in the displayed panel and press ENTER.
3. Enter line command **L** in front of the archive dataset.

Alternative navigation

- Option **A.3** (VOLUMES), then line command **A** in Archive Volume table, then line command **L** in Archive Datasets table
- Option **A.4** (DEVICES), then line command **V** in Archive Device Definitions table, then line command **A** in Archive Volume table, then line command **L** in Archive Datasets table

Archived Lists table

```

PE97IG95 ----- Row          1 of      3
Command ==> _____ Scroll ==> PAGE

Display Archived Lists

Archive Dataset : BETA97.TAPE365.CASS.E04149.C001
Archive Medium  : TAPE          Volume : H00735 Unit : IBMXT
Archive Pool    : TAPE365      Owner  : CUST001
Expiration Date : 05/28/2005

Date      Time      Form      Extension      Report      Expire
05/27/2004 13:42:24 FINANCE  ACCOUNTING
05/27/2004 13:46:17 FINANCE  ACCOUNTING
05/27/2004 15:36:28 FINANCE  ACCOUNTING
***** BOTTOM OF DATA *****

```

Fields

The fields displayed in this panel are self-explanatory.

Defining archive devices for optical disks

Overview

Adabas Audit Data Retrieval uses the archive device table when archiving to optical disk. The archive device table assigns logical volume serial numbers to physical platters of an optical disk device.

This information in the archive device table enables Adabas Audit Data Retrieval to keep archive datasets of different archive subpools and of different owners on different platters.

Navigation

From the "Primary Selection Menu" choose:

- Option **A.4**

The "Select Archive Device Definitions" panel is displayed, where you can specify your selection criteria.

Archive Device Definitions table

```

PE97AD05 ----- Row          1 of      6
Command ==> _____ Scroll ==> CSR_

Display Archive Device Definitions

  ID - Insert Device      IV - Insert Volumes      D - Delete      V - Volumes

Sel  Device  Number of Sides per  Number of Lowest  First  Highest Last
      Media  Medium          Volumes  MedNo  Volume  MedNo  Volume
/F010  12      2              24      1      B00001  12      B00012
/F011  12      2              24      13     B00013  24     BOF024
/F012  12      2              24      25     B00025  36     BOF036
/F013  12      2              24      37     B00037  48     BOF048
/F014  12      2              24      49     B00049  64     BOF064
/F015  12      2              24      65     B00065  72     BOF072
***** BOTTOM OF DATA *****

```

Defining volumes for a new device

To define a new device and volumes for this device:

1. Enter line command **ID** in front of any device definition.
2. In the displayed panel, specify the following information:
 - Name of the device that has been defined in the I/O configuration (HCD)
 - Number of platters of this device
 - Number of volumes (sides) per platter
 - Start volume serial number
3. Press ENTER to insert the archive device definition and the logical volume serial numbers for this device.

This will display the message '*start_volser - end_volser* INSERTED' at the top of the screen.

4. Press PF3 to return to the Archive Device Definition table.

Example

In this example, volumes for an optical disk (in this example: Device OPT1) are defined; each platter has two sides.

To insert a definition for the device OPT1 and assign the volumes H00001 through H00024 to this new device, specify the following in the Archive Device Definition panel:

```

PE97AD10 -----
Command ==> _____

Insert Archive Device Definition

Archive Device Name ==> OPT1....

Number of Platters ==> 12..      (1-9999)
Sides per Platter  ==> 2.        (1-50)

Start Volume Name  ==> H00001

Press the ENTER key to insert the archive device definitions.
Press the END key to return to the previous panel.

```

To display the volumes that have been inserted for this device:

- In the Archive Device Definition table, enter line command **V** in front of the device.

```

PE97AD35 ----- Row      1 of      24
Command ==> _____ Scroll ==> CSR_

Display Archive Volume Definitions for Device OPT1      Page 1 of 2
                                                         ( LEFT/RIGHT )

S - Select      A - Archive Datasets

Sel  Volume Status MedNo Side  RetPd Pool      Dsname Prefix
-----
H00001 EMPTY  0001  01  0
H00002 EMPTY  0001  02  0
H00003 EMPTY  0002  01  0
H00004 EMPTY  0002  02  0
H00005 EMPTY  0003  01  0
H00006 EMPTY  0003  02  0
H00007 EMPTY  0004  01  0
H00008 EMPTY  0004  02  0
H00009 EMPTY  0005  01  0
H00010 EMPTY  0005  02  0
H00011 EMPTY  0006  01  0
H00012 EMPTY  0006  02  0
H00013 EMPTY  0007  01  0
H00014 EMPTY  0007  02  0
H00015 EMPTY  0008  01  0
H00016 EMPTY  0008  02  0

```

Assigning letters to the volumes of one platter

When you enter a start volume serial number that ends with a number, like in the example above, all logical volumes are numbered sequentially.

When you enter a start volume serial number that ends with a character, an additional panel is displayed where you can enter the letters to be used for the sides of each platter.

Example

To insert a definition for the device OPT2 and assign the volumes H0001A/H0001B through H0012A/H0012B to this new device, specify the following in the Archive Device Definition panel:

```

PE97AD10 -----
Command ==> _____

Insert Archive Device Definition

Archive Device Name ==> OPT2...

Number of Platters ==> 12..      (1-9999)
Sides per Platter  ==> 2.       (1-50)

Start Volume Name  ==> H0001A

Press the ENTER key to insert the archive device definitions.
Press the END key to return to the previous panel.

```

When you press ENTER, an additional panel will be displayed where you can assign identifiers to the sides of the platter. The number of input fields on this panel depends on the number of volumes per platter.

In this example, there are two volumes (sides) per platter which are assigned the identifiers A and B.

```

PE97AD11 -----
Command ==> _____

Insert Archive Device Definition

Archive Device Name      : OPT2      Archive Volume Prefix  : H0001

Enter the Suffix for the volume name per side of the platter:
Side  Suffix Side  Suffix Side  Suffix Side  Suffix Side  Suffix
01 ==> A    02 ==> B    03          04          05
06          07          08          09          10
11          12          13          14          15
16          17          18          19          20
21          22          23          24          25
26          27          28          29          30
31          32          33          34          35
36          37          38          39          40
41          42          43          44          45
46          47          48          49          50

Press the ENTER key to insert the archive device definitions.
Press the END key to return to the previous panel.
    
```

To display the volumes that have been inserted for this device:

- In the Archive Device Definition table, enter line command **V** in front of the device.

```

PE97AD35 ----- Row      1 of      24
Command ==> _____ Scroll ==> CSR_

Display Archive Volume Definitions for Device OPT2      Page 1 of 2
                                                         ( LEFT/RIGHT )

S - Select      A - Archive Data Sets

Sel  Volume Status MedNo Side  RetPd Pool      Dsname Prefix
-----
H0001A EMPTY  0001  01  0
H0001B EMPTY  0001  02  0
H0002A EMPTY  0002  01  0
H0002B EMPTY  0002  02  0
H0003A EMPTY  0003  01  0
H0003B EMPTY  0003  02  0
H0004A EMPTY  0004  01  0
H0004B EMPTY  0004  02  0
H0005A EMPTY  0005  01  0
H0005B EMPTY  0005  02  0
H0006A EMPTY  0006  01  0
H0006B EMPTY  0006  02  0
H0007A EMPTY  0007  01  0
H0007B EMPTY  0007  02  0
H0008A EMPTY  0008  01  0
H0008B EMPTY  0008  02  0
    
```

Adding volumes to an existing device

To add new volumes for an existing device:

1. Enter line command **IV** in front of the device definition.
2. In the displayed panel, specify the following information:
 - Number of platters for which you want to define logical volumes
 - Start volume serial number
3. Press ENTER to insert the logical volume serial numbers for this device.

This will display the message '*start_volser - end_volser* INSERTED' at the top of the screen.

4. Press PF3 to return to the Archive Device Definition table.

Archive volumes of a device

Overview

The Archive Device Definition table contains information on which logical volume serial numbers are assigned to the physical platters of an optical disk.

You can display information on the logical volumes that are assigned to a device.

Navigation

To display the archive volumes of a device:

1. From the Primary Selection Menu, choose option **A.4**.
2. Type selection criteria in the displayed panel and press ENTER.
3. Enter line command **V** in front of the archive device.

Archive Volume Definitions for Device table

PE97AD35 -----							Row	1 of	2
Command ==> _____							Scroll ==>	CSR_	
Display Archive Volume Definitions for Device : F010							Page	2 of	2
							(LEFT/RIGHT)
S - Select		A - Archive Datasets							
Sel	Volume	Status	MedNo	Side	RetPd	Pool	Dsname	Prefix	
	BOF001	USED	0001	01	365	ODISK	QAB97.ODISK		
	BOF002	USED	0001	02	365	ODISK	QAB97.ODISK		
	BOF003	USED	0002	01	365	ODISK	QAB97.ODISK		
	BOF004	USED	0002	02	365	ODISK	QAB97.ODISK		
	BOF005	EMPTY	0003	01	0				
	BOF006	EMPTY	0003	02	0				
***** BOTTOM OF DATA *****									

Fields

Field	Description
Volume	Volume serial number of the archive volume
Status	Either Used or Empty
MedNo	Number of the platter
Side	Number of the side of the platter
RetPd	Retention period in days
Pool	Archive pool name
Dsname Prefix	Prefix (taken from the archive subpool definition if status is Used) For more information on archive dataset names, see "Archive dataset names" on page 144.
Created	Date and time when the archive volume was defined for this device
Owner	Owner of the volume

Archive Volume Definition panel

```

PE97AD50 -----
Command ==> _____

Display Archive Volume Definition   Last Update: B97ADM   08/03/2002 17:13:26

Device Name           : F010
Volume Name           : BOF003
Status                 : USED

Retention Period      : 365      Days
Pool Name              : ODISK
Prefix for Dataset Name : QAB97.ODISK

Order for Reload      : 00001
Owner                  : CUST001

Press the END key to return to the previous panel.

```

Fields

The fields are self-explanatory.

Batch utilities for archiving, reloading, and copying of archive datasets

Batch utilities

All batch utilities are described in chapter "Batch utilities" on page 218.

For more information, see these sections:

- "B97ARC: Archive batch utility" on page 227
- "B97DEARC: Archive cleanup batch utility" on page 269
- "B97BRLD: Reload request batch utility" on page 236
- "B97RLD: Reload batch utility" on page 305
- "B97MRLD: Mass reload batch utility" on page 299
- "BST08OCP: Archive copy batch utility" on page 310

Copying archive datasets

Adabas Audit Data Retrieval uses hardware pointers for efficient positioning during reloading. You must therefore always use the utility BST08OCP if you want to create copies of archive datasets. Using BST08OCP will ensure that the required hardware pointers are set correctly.

Trying to reload data from copies of archive datasets that have been created with a different utility will lead to I/O errors. If you have already created copies with a different utility, you can copy these archive datasets again using BST08OCP. The hardware pointers for the newly created copies will then be correct.

Profiles and customization (Options P and C)

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Which information is stored in user profiles

Overview

Each user can define a series of user-dependent settings for Adabas Audit Data Retrieval and the Beta Browser. This chapter describes how you can customize these settings to suit your own needs or preferences.

Adabas Audit Data Retrieval profile

Your Adabas Audit Data Retrieval profile includes information on:

- The Adabas Audit Data Retrieval subsystem you work with
- The language and date mask used in panels
- The default jobcard used when generating JCL
- The print characteristics for printing tables (TPRINT)
- Current selection criteria under option 1 (BROWSE)
- The user-defined layout of the List Selection table

The current settings are stored in your user profile when you exit Adabas Audit Data Retrieval and will be restored at your next Adabas Audit Data Retrieval session. Changes to your user profile take effect immediately.

Each Adabas Audit Data Retrieval user (TSO user ID) has his or her own profile.

Browser profile

The Browser profile includes information on how lists are displayed on the screen.

There is one Browser user profile for each user; this is independent of the individual product. For example, if you work with `_beta log|z` and Adabas Audit Data Retrieval, changing the color of the ruler when browsing a list under `_beta log|z` will also affect the color of the ruler when browsing lists under Adabas Audit Data Retrieval.

Where is the user profile stored?

When a user works under TSO, the user profile is stored in ISPF variables. When a user works under VDF, the user profile is stored in the VDF database. (When the following description refers to ISPF variables, this is meant to include VDF, which is a simulation of an ISPF environment.)

The following applies to the validity of the user profile:

- Changes to your user profile take effect immediately.
- When a Adabas Audit Data Retrieval session is terminated normally, the settings will also apply to future sessions.

If system works with VCI table

The VCI table contains one record for each user (user definition). This record can be used to initialize some of the settings stored in ISPF variables with predefined values when a user calls Adabas Audit Data Retrieval.

If the VCI table is processed when a user calls Adabas Audit Data Retrieval, the settings stored in the user profile are overwritten with the values from the user definition.

A variable will be overwritten only if the corresponding field in the user record contains a value.

From the user's point of view, this means:

If the user definition contains a setting (for example, that the product language is English), then the user can change the product language for the current session. When the user terminates his Adabas Audit Data Retrieval session and then calls Adabas Audit Data Retrieval again, the settings from the user definition (product language is English) will apply again.

User settings in VCI table

As an administrator, you can use the VCI table to ensure that individual users always find the same default values when calling Adabas Audit Data Retrieval, for example, that the List/Report Selection panel contains certain default values in certain fields.

In addition to this, you can use the VCI table to block certain fields in the List/Report Selection panel or to make these fields required.

When does a system use the VCI table?

When a user works under VDF or under `_beta` view, the VCI table is always processed.

When a user works under TSO, Adabas Audit Data Retrieval must be called with the initialization exit in order to process the VCI table. For more information, refer to the *Adabas Audit Data Retrieval Installation and System Guide*.

Changing colors and effects (Option P.1)

Overview

You can use option **P.1** to define display attributes for the various elements used in Beta product panels, such as colors, reverse video, and pad characters. These settings affect all your Beta Systems products.

Navigation

From the "Primary Selection Menu", choose:

- Option **P.1**

The "Colors and Effects" panel is displayed, where you can check or change your settings.

Colors and Effects panel

```

PEB0PRO1 -----
Command ==> _____

Colors and Effects

Panel Header ..... ==> WHITE          Effect      Intens  Pad
Panel Title ..... ==> PINK           HIGH
Section Header ..... ==> BLUE          REVERSE    HIGH
Column Header ..... ==> GREEN         REVERSE    HIGH
Selection Text ..... ==> BLUE          HIGH
Important Output..... ==> RED           HIGH
Normal Output ..... ==> BLUE          LOW
Action Explanations ..... ==> GREEN        LOW
Field Explanations ..... ==> BLUE          LOW
Input/Output Delimiter ..... ==> WHITE        HIGH
Optional Input ..... ==> TURQ          LOW
Required Input ..... ==> RED           HIGH
Selection Input ..... ==> YELLOW        USCORE     LOW

Colors are: WHITE RED BLUE GREEN PINK YELLOW TURQ
Effects are: USCORE REVERSE BLINK Pads are: . ' " _

Press ENTER to update the values, or END to return to the previous menu.
    
```

Values for Color, Effect, Intensity and Pad

Display attribute	Allowed values
Color	White Red Blue Green Pink Yellow Turq (i.e. turquoise)
Effect	Reverse (reverse video) Uscore (underlined characters) Blink (blinking display) Effects are useful to indicate the length of input fields on the screen. If your screen or log mode does not support effects, you can also use padding characters instead.
Intensity	High Low
Pad	. (period) ' (apostrophe) " (quotation mark) _ (underline) Pads are useful to indicate the length of input fields on the screen, for example, if your screen or log mode does not support effects.

Sample screens

The following screens show which panel elements are affected by settings in the "Colors and Effects" panel. (Colors have been chosen for ease of identification of panel elements rather than ergonomic reasons.)

```

PEB0PRO1 -----
Command ==> █

Colors and Effects

Panel Header ..... ==> Color WHITE      Effect      Intens  Pad
Panel Title ..... ==> PINK          HIGH
Section Header ..... ==> BLUE          REVERSE    HIGH
Column Header ..... ==> GREEN         REVERSE    HIGH
Selection Text ..... ==> BLUE          HIGH
Important Output..... ==> RED           HIGH
Normal Output ..... ==> BLUE          LOW
Action Explanations ..... ==> GREEN         LOW
Field Explanations ..... ==> BLUE          LOW
Input/Output Delimiter ..... ==> WHITE         HIGH
Optional Input ..... ==> TURQ          LOW
Required Input ..... ==> RED           HIGH
Selection Input ..... ==> YELLOW         USCORE     LOW

Colors are: WHITE RED BLUE GREEN PINK YELLOW TURQ
Effects are: USCORE REVERSE BLINK Pads are: . ' " _

Press ENTER to update the values, or END to return to the previous menu.

TT █ > 0 2,15 B
    
```

PEB5DD10
Command

Row 34 of 41
Scroll PAGE

2 Dataset Definition Selection Page 1 of 3
(LEFT/RIGHT)

Databases for Subsystem SSID BnnP SYSVAR Support : INACTIVE

I - Insert Model F - Format Model
S - Select Dataset Definition or Update Model or Status D - Delete Model or Empty
X - Database Extension RX - Reset Database Extension (FEX)
R - Reset Model (ERR)

4 Sel	4 Dataset Name	X Total	Free	%	Sta
	TRAS.DB.SPOOL4	00054000	00036958	031	OPN
	TRAS.DB.SPOOL5	00054000	00008412	084	OPN
	TRAS.DB.SPOOL6	00054000	00000000	100	FUL
	TRAS.DB.SPOOL7	00054000	00000000	100	FUL
	TRAS.DB.SPOOL8	00054000	00036958	031	OPN
	TRAS.DB.SPOOL9	00054000	00017994	000	EMP

***** BOTTOM OF DATA *****

TI 0 2,15 B

PEB5DDR3
Command

2 Insert Model Definition SYSVAR Support : INACTIVE

Product

8 Data Set Name

8 Data Set Type SP (SP - Spool, SR - Reload)

8 4 KB blocks 1 (1-7, for CIsze)

3 Volume

3 Space Allocation Requirements:

7 Primary Space (Cylinders)

If managed by SMS:

MGMTCLAS

STORCLAS

DATACLAS

7 Press the ENTER key to confirm your request.
7 Press the END key to abort your request and to return to the previous panel.

TI 0 6,25 B

- Legend**
- 1 Panel header
 - 2 Panel title
 - 3 Section header
 - 4 Column header
 - 5 Important output
 - 6 Normal output
 - 7 Action explanations
 - 8 Field explanations
 - 9 Input/Output delimiter
 - 10 Optional input
 - 11 Required input
 - 12 Selection input

Selection Text is not used at present.

Choosing a subsystem, language, and date mask (Option P.2)

Overview

Under option **P.2**, you can choose the subsystem that you want to use and you can specify certain settings for the ISPF application. The panel also displays the current modification and PTF level for Adabas Audit Data Retrieval and BSA.

Navigation

From the "Primary Selection Menu", choose:

- Option **P.2**

The "Beta System Profile Options" panel is displayed, where you can check or change your settings.

Beta System Profile Options panel

```

PEB0PRF -----
Command ==> _____

Beta System Profile Options

System Name          ==> B97PROD.
System Location      ==> BERLIN.....
Subsystem ID         : B97P
System Level         : V7R2-nn      bsa Level      : nnnn-nn
System PTF Level    : xxxxnnnn      bsa PTF Level : PBSnnnn

User Date Mask       ==> MM/DD/YYYY  MM/DD/YY, DD.MM.YY, DD/MM/YY, YY.DDD
                    MM/DD/YYYY, DD.MM.YYYY, DD/MM/YYYY
                    YYYY.DDD, YYYY-MM-DD
Beta Product Language ==> E          (E)nglish,(G)erman
Extended Help Mode   ==> YES         (Y)es, (N)o

Press the ENTER key to update your system profile options.
Press the END key to return to the previous menu.

```

Fields

Field	Description
System Name	System name (max. 8 characters)
System Location	System location (max. 16 characters)
Subsystem ID System/BSA Level System/BSA PTF Level	<p>The following information is displayed here:</p> <ul style="list-style-type: none"> • Subsystem ID of the Adabas Audit Data Retrieval subsystem • System and PTF level of Adabas Audit Data Retrieval • System and PTF level of BSA <p>PTF level NONE means that there are no PTFs.</p>
User Date Mask	Date format for the online application (entering and displaying date fields)
Beta Product Language	Language to be used by the online application (panels, help panels, and messages)
Extended Help Mode	<p>Yes In tables the (most important) line commands are displayed between the panel title and the column headers</p> <p>Note: You can also change this setting for the duration of the session by entering the primary command PROF HL ON OFF.</p>

Choosing a different subsystem

To choose a different subsystem:

1. From the Primary Selection Menu, choose option **P.2**.

This will display your current settings in the "Beta System Profile Options" panel.

2. Do one of the following:

- Type a name in the **System Name** field and a location in the **System Location** field and press ENTER.
- Clear the **System Name** and **System Location** field or type a mask in these fields, press ENTER and then choose a subsystem from the displayed table.

**System
Selection table**

Column	Description
Name	Name of the Adabas Audit Data Retrieval system
Title	Descriptive title (max. 25 characters)
Location	Location of the system
SSID	Subsystem ID
Sysname	System name
Product	Identifying product number
Version	Version, release and level
PTF Lvl	Product PTF level
Act	Indicates whether the subsystem is currently active
L	Y (Yes) indicates a local system
O	Y (Yes) indicates that the Open Communication Facility (OCF) is presently active
X	Y (Yes) indicates that the Cross Coupling Facility (XCF) is presently active
D	Indicates a DB-Slave-System (S)

Jobcard and auto-selection (Option P.3)

Overview

The following is defined in the user profile:

- Whether the following options should display a selection panel first or carry out the selection automatically:
 - 1** BROWSE
 - I** INDEX
 - G** GLOBAL
- Which jobcard is to be used when tailoring JCL online (Option **S.3**)

Navigation

From the "Primary Selection Menu", choose:

- **Option P.3**
 The "User Profile" panel is displayed, where you can check or change your settings.

User Profile panel

```

PE97PR03 -----
Command ==> _____

User Profile

Browse Options:

Autoselect ==> NO_      (Y)es,(N)o

Job Card:

==> //MYB97JOB JOB  ,'BETA 97 USER',CLASS=A,MSGCLASS=P,NOTIFY=&SYSUID.....
==> //*.
==> //*.
==> //*.

Press the ENTER key to update the default values.
Press the END key to return to the previous menu.
    
```

Fields

Field	Description
Autoselect	<p>No Choosing option 1 (BROWSE) and option I (INDEX) will display a selection panel to enter selection criteria for lists.</p> <p>Yes Choosing option 1 (BROWSE) and option I (INDEX) will skip the selection panel and automatically display the lists that match the current selection criteria.</p>
Job Card	This jobcard is used when tailoring JCL online for the batch jobs available under option S.3 (see "Batch Job Selection Menu (Option S.3)" on page 211)

Browse user profile (Option P.4)

Overview

Each user can define a series of user-dependent settings for the Beta Browser in the browse user profile. The general display options can be stored and a line limit for search processes can be specified in this profile. The settings are defaults for any list you browse.

Navigation

From the "Primary Selection Menu" choose:

- **Option P.4**

Use PF8 (DOWN) and PF7 (UP) to move between the two pages of the browse user profile:

Page 1: "Screen Layout Definition" panel

Page 2: "Browse Options Definition" panel

Alternative navigation

The browse user profile can also be called from within the Beta Browser like this:

1. Enter the primary command PROFILE in the command line (short form: PRO).

This will display the "Browse User Profile Menu".

2. Do one of the following:

- Enter option **1** to display the "Screen Layout Definition" panel.
- Enter option **2** to display the "Browse Options Definition" panel.

Screen Layout Definition panel

Here you can specify screen attributes, such as colors, intensity, and special attributes for particular fields.

```

PE23BPR1 ----- Page 1 of 2
Command ==> _____

Screen Layout Definition
-----
!      Color      !      Intensity !      Special effect !
-----
! Normal lines   ! ==> B      ! ==> L      ! ==> _      !
! Rulers         ! ==> W      ! ==> L      ! ==> R      !
! Held lines     ! ==> R      ! ==> L      ! ==> _      !
! Found strings  ! ==> B      ! ==> H      ! ==> R      !
! Bottom markers ! ==> Y      ! ==> L      ! ==> R      !
! Object Info lines ! ==> Y      ! ==> L      ! ==> _      !
! Lines with notes ! ==> W      ! ==> L      ! ==> R      !
-----

Enter one of the following values:

Color          : (W)hite,(R)ed,(B)lue,(G)reen,(P)ink,(Y)ellow,(T)urquoise
Intensity      : (H)igh,(L)ow
Special effect : (U)nderlined,(B)link,(R)everse,BLANK

Press ENTER to update your profile data. Press DOWN for the next page.
Press END to return to the previous menu.

```

Legal values for Color, Intensity, and Special effect

Note: These functions are not available for all terminals.

Legal values for	Are ...
Color	W white R red B blue G green P pink Y yellow T turquoise
Intensity	H high L low
Special effect	U underlined R reverse video B blinking display <i>blank</i> normal display

Browse Options Definition panel

```

PE23BPR2 -----Page 2 of 2
Command ==> _____

Browse Options Definition

Display mode          ==> P      (E)xtended,(P)age
Transaction mode      ==> N      (Y)es,(N)o
Bottom markers        ==> Y      (Y)es,(N)o
Full display          ==> N      (Y)es,(N)o
Find line limit       ==> 1000.. (0 - 999999)
Replace excluded cols ==> N      (Y)es,(N)o
Exclude replacement char ==> ^
Display object info   ==> N      (Y)es,(N)o
Overlay               ==> MERGE___ (M)erge,(1 - 99)
                       (L)ast,(A)ny
Mark pages with notes ==> Y      (Y)es,(N)o
Mark lines with notes ==> Y      (Y)es,(N)o

Press the HELP key to get help information.
Press the ENTER key to verify changes or the END key to quit.
    
```

Fields

Field	Description
Display Mode	<p>Page Displays lines of only one page on the screen; when you scroll to the bottom of a page, the bottom of the screen displays blank lines</p> <p>Extended Displays lines of one or several pages as a continuum; when you scroll to the bottom of a page, the bottom of the screen displays the beginning lines of the next page</p> <p>Corresponding primary command: EXT [ON OFF]</p>
Transaction Mode	<p>Determines how the Beta Browser handles virtual storage.</p> <p>Yes The Beta Browser holds requested storage only until a command is complete and then releases the storage immediately afterwards.</p> <p>No The Beta Browser puts storage on hold when a command is complete in order to reduce the number of operations of requesting and returning storage.</p> <p>Use Transaction mode if a large number of users are working with the VTAM application simultaneously.</p>
Bottom markers	<p>Yes Displays end of page markers between adjacent pages when using Extended Display mode</p> <p>Corresponding primary command: PBR [ON OFF]</p>
Full display	<p>No Makes the Browser use the first column of the screen for color attributes (in this mode, the data columns of the list are displayed in columns 2 through 80/132 of the screen)</p> <p>Yes Makes the Browser use all columns of the screen for displaying the data columns of the list (in this mode, displaying colors is not supported)</p> <p>Corresponding primary command: AT [ON OFF]</p>
Find Line Limit	<p>Legal values: 0 through 999999</p> <p>Limits the number of lines that are to be searched when you enter a FIND command.</p> <p>"Find Line Limit = 0" means there is no line limit. In this case, the FIND command will search the entire list that is being displayed in the Beta Browser.</p>

Field	Description
Replace excluded cols	<p>Yes That one or several columns are hidden is indicated on the screen by the string blank + padding character + blank; the padding character to be used is specified in the following field.</p> <p>No Hidden columns are not indicated on the screen.</p>
Exclude replacement char	Padding character used to indicate excluded columns (if Replace excluded cols is Yes)
Display object info	<p>Yes The Beta Browser uses the first four lines of the screen to display information on the list that you are currently browsing</p> <p>Corresponding primary command: I [ON OFF]</p>
Overlay	<p>Determines how the Beta Browser displays overlaid lines. Enter one of the following:</p> <p>Merge merges overlaid lines into one line; the merged line will display the first non-blank character (if available) at each column position, for example:</p> <pre>Line 1: aaa aaa aaa aaa Line 2: bbbbb bbbbb bbbbb Merged line: aaabaaabaaa aaabb</pre> <p>Last displays the last line.</p> <p>n displays the nth line.</p> <p>Any displays overlaid lines one below the other.</p>
Mark pages with notes	<p>Yes That a page has one or several browser notes is indicated by the string Nte in the panel title (private note of the user or public note).</p>
Mark lines with notes	<p>Yes That a line has one or several browser notes is indicated by color or inverse display (private note of the user or public note).</p> <p>The color and effect to be used for lines with notes is specified under option 1 - SCREEN of the Browse User Profile menu.</p>

Customizing the List/Report Selection Table layout (Option P.5)

Introduction

The List/Report Selection table provides several layouts (see "Layouts for the List/Report Selection table" on page 195). You can switch between these layouts by scrolling horizontally using the keys PF10 (LEFT) and PF11 (RIGHT).

Each user can also define an own layout. This layout will be used when you specify **User** in the **Layout** field on page 2 of the List/Report Selection panel.

You can customize the layout of the "List/Report Selection Table" according to your specific requirements. Alternatively, you can also enter the primary command LAYOUT in the "List/Report Selection Table".

Customizing the layout of the selection table

To customize the layout of the "List/Report Selection Table":

1. From the "Primary Selection Menu", choose option **P.5**.
This will display the "List/Report Selection Table Layout" panel.
2. Enter the desired values in the **Layout** panel area.
3. Press PF8 to view further values offered by the system and make the desired entries.
4. Enter the desired values in the respective columns and press ENTER to store them in the table in the desired sequence.

The values will be displayed in the line immediately following the **Layout:** line.

5. Do one of the following:
 - Enter the primary command SAVE in the command line to save the values of your customized layout in your ISPF-user profile. The "List/Report Selection Table" is now customized according to your requirements.
 - Press PF3 to discard the changes made to the table.

List/Report Selection Table Layout

```

PE97PR05 ----- Row 1 of 32
Command ==> _____ Scroll ==> CSR_

List/Report Selection Table Layout

Pos = Field position  A      = Attribute (H)ighlighted, justified (R)ight
Len = Field length   Header = Table header text

Enter SAVE in the command line to store the layout in your user profile.

Layout:
Sel .Date .Time .Form .Extension .Report .

Pos A Len Max.Len Header Default Header Description
01 _ 10 10 Date_____ Date Beta 97 read-in date
02 _ 11 11 Time_____ Time Beta 97 read-in time
03 _ 8 8 Form_____ Form Form name
04 _ 16 16 Extension_____ Extension Extension name
05 _ 16 16 Report_____ Report Report name
.. _ 5 7 Pages_____ Pages Number of pages
.. _ 10 10 Lines_____ Lines Number of lines
.. _ 7 7 Status_____ Status Online/Offline
.. _ 4 4 Onl_____ Onl List/report is online
.. _ 4 4 View_____ View List/report is viewable
    
```

Columns

Column	Description
Pos	Enter the position in which the specific field and the corresponding table header text should appear on your screen in your specific "List/Report Selection Table" layout.
A	Enter an H in this column in case you would like to highlight a specific table column in your customized "List/Report Selection Table" layout. Enter an R in case you would like the column to be right justified in your "List/Report Selection Table" display. The system's default value is <i>blank</i> .
Len	Enter the desired length of the field and the table header text column length. In case you enter a value in this column which is greater than the maximum length offered by Adabas Audit Data Retrieval, the system will automatically set back the value to the maximum length of the header text column.
Max. Len	The maximum length allowed by Adabas Audit Data Retrieval for this specific table header column. This value can not be modified.
Header	You can customize the text of your table header column according to your requirements as long as it does not exceed the maximum length offered by Adabas Audit Data Retrieval for this specific header column.
Default Header	All default table header options offered by Adabas Audit Data Retrieval for customizing your individual "List/Report Selection Table" layout.
Description	Description of the table header columns.

Notes on changing and saving the user layout

The first column of a user layout is reserved for the select column. Type an appropriate value in the **Pos** column and press ENTER to add the corresponding column to your user layout.

When you press ENTER in the "List/Report Selection Table Layout" panel, the fields are re-sorted according to the specified position so that the selected fields are displayed at the top of the table. The line below **Layout** shows the current arrangement of the columns that you have selected for your user layout:

```

PE97PR05 ----- Row 1 of 31
Command ==> _____ Scroll ==> PAGE

List/Report Selection Table Layout

Pos = Field position  A      = Attribute (H)ighlighted, justified (R)ight
Len = Field length   Header = Table header text

Enter SAVE in the command line to store the layout in your user profile.

Layout:
Sel  Date      Time  Description
Pos A Len Max.Len Header          Default Header  Description
01  _ 10   10   Date_____ Date             Beta 97 read-in date
02  _ 5_   11   Time_____ Time             Beta 97 read-in time
03  _ 55   70   Description___ Title            List/report title
..  _ 8_   8    Form_____ Form             Form name
..  _ 16   16   Extension___ Extension       Extension name
..  _ 16   16   Report_____ Report          Report name
..  _ 16   16   Sta.Report___ Sta.Report      Report name (static name)
..  _ 11   11   SMode_____ SMode          Report search mode
..  _ 7_   7    Pages_____ Pages          Number of pages
..  _ 4_   4    Onl_____ Onl            List/report is online
    
```

If you press PF3, you leave the panel without saving any changes. A message will inform you of this. In order to save changes to the user layout, you must enter the primary command SAVE in the command line.

When you call the List/Report Selection Table Layout panel from the List/Report Selection table (primary command LAYOUT), changes to the user layout will become effective only after you refresh the table display (new selection or primary command REF).

User profiles defined by the administrator

Overview

As an administrator, you can use the VCI table to ensure that individual users always find the same default values when calling Adabas Audit Data Retrieval, for example, that certain fields in the List/Report Selection panel are populated with default values.

Use option **C.1** to maintain the user definitions in the VCI table.

Requirements

When a user works under VDF or under `_beta` view, the VCI table is always processed.

When a user works under TSO, Adabas Audit Data Retrieval must be called with the initialization exit in order to process the VCI table. For more information, refer to the *Adabas Audit Data Retrieval Installation and System Guide*.

VCI table

The VCI table has one record for each Adabas Audit Data Retrieval user. This record contains the settings to be used for this user.

The fields of the record include the following:

- Selection criteria for the selection of lists
(same as option **1** (BROWSE) plus the option of blocking fields or making fields required)
- Browse options
(same as option **2** (OPTIONS) of the Browse User Profile menu)
- Selected fields of the user profile (same as option **P.2** and **P.3**)

Records in the VCI table can be created manually or automatically.

User definition STANDARD

When you use the VCI table, you should create a user definition under the user ID STANDARD to define the settings that are to be used for new users of Adabas Audit Data Retrieval.

Adabas Audit Data Retrieval uses the definition for the user STANDARD as a template when creating new records in the VCI table.

- Processing the VCI table** When a user calls Adabas Audit Data Retrieval, it checks whether there is a record for this user in the VCI table.
- If Yes: The ISPF variables of the user profile are redefined according to the values of this user's definition in the VCI table.
- If a VCI-field is empty, the corresponding ISPF variable is not redefined. If the ISPF variable contains a value, this value is preserved.
- If No: A new record is created for this user and then the ISPF variables of the user profile are redefined according to the values of the newly created definition.
- The following applies when creating a new record:
- The values for the new record are taken from the definition of the user STANDARD.
 - If there is no record for the user STANDARD, some values for the new record are taken from the system options and most of the fields remain blank.

- Note on _beta view** Adabas Audit Data Retrieval always reads the VCI table when a _beta view user logs on.
- If the VCI table does not have a record for this user, Adabas Audit Data Retrieval uses the record that has been defined as standard user for this system in _beta view.
- If the VCI table does not have a record for the specified standard user, logon is rejected.

User Definition panel (Option C.1)

Navigation

From the "Primary Selection Menu" choose:

- Option C.1

The "Select Online User Definitions" panel is displayed, where you can specify your selection criteria.

User definition panel (Page 1)

```

PE97VC10 ----- Page 1 of 5
Command ==> _____

Insert User Definition

User ID      ==> STANDARD
User Name    ==> BETA97 DEFAULT USER_____
Language     ==> ENGLISH      (E)nglish, (G)erman
Date Mask    ==> MM/DD/YYYY   MM/DD/YY, DD.MM.YY, YY.DDD, YYYY-MM-DD,
                          MM/DD/YYYY, DD.MM.YYYY, YYYY.DDD
Browse Only  ==> NO_          (Y)es, (N)o
Auto Select  ==> NO_          (Y)es, (N)o

Selection Panel ==> PE97BR00   PE97BR00 or user defined name
Entry Panel   ==> PE97PRIM   PE97PRIM or user defined name

BWE Role     ==> _____   (Case sensitive)

Press ENTER to insert the definition. Press DOWN to display the next page.
Press END to return to the previous panel.
    
```

Fields

Field	Description
User ID	TSO user ID
User name	Descriptive user name (max. 32 characters)
Language	Language to be used by the online application (panels, help panels, and messages)
Date Mask	Date format for the online application (entering and displaying date fields)
Browse Only	<p>Yes The user has only access to option 1 (BROWSE); when the user calls Adabas Audit Data Retrieval, the panel specified in the Selection Panel field will be displayed; by default, this is the List/Report Selection panel (PE97BR00)</p> <p>No When the user calls Adabas Audit Data Retrieval, the panel specified in the Entry Panel field will be displayed; by default, this is the Primary Selection Menu (PE97PRIM)</p>

Field	Description
Auto Select	<p>Yes When the user selects option 1 (BROWSE), option I (INDEX), or option G (GLOBAL), Adabas Audit Data Retrieval will automatically look for matching lists. You can specify the selection criteria in the corresponding fields of the user definition. The Adabas Audit Data Retrieval user will not be able to specify selection criteria because the selection panel is skipped.</p> <p>No When the user selects option 1 (BROWSE), Adabas Audit Data Retrieval will display the panel specified in the Selection Panel field; by default, this is the List/Report Selection panel (PG97BR00)</p> <p>Note: When you specify Yes in the Browse Only and the Auto Select field, the selection of lists (Option 1) is automatically started when the user logs on. If matching lists are found, the first panel to be displayed to the user is the List/Report Selection table. If no matching lists are found, calling Adabas Audit Data Retrieval will lead to the message No data found.</p>
Selection Panel	<p>Name of the selection panel (max. 8 characters; the second character is the language character, for example E for English or G for German)</p> <p>The default entry panel is the List/Report Selection panel (PE97BR00).</p>
Entry Panel	<p>Name of the entry panel (max. 8 characters; the second character is the language character)</p> <p>The default entry panel is the Primary Selection Menu (PE97PRIM).</p>
BWE role	<p>Role of this user in _beta view (max. 32 characters, case-sensitive)</p>

**User definition panel
(Page 2)**

```

PE97VC11 ----- Page 2 of 5
Command ==> _____

Variables for Displaying Lists or Reports (Option 1 & I) for User ID: STANDARD

Select from Last      ==> 01 HOURS__ 01-99, (H)ours, (D)ays
                        or blank to define Start/End
Start Date (MM/DD/YYYY) ==> YESTERDAY_ Start Time ==> _____
End Date (MM/DD/YYYY) ==> TODAY_____ End Time ==> _____

Optional Selection Criteria:

Form      ==> _____ Required Disabled
          ==> _____ ==> YES ==> ____
Extension ==> _____ ==> ____ ==> ____
Report    ==> _____ ==> ____ ==> ____
Jobname   ==> _____ ==> ____ ==> ____
Folder    ==> _____ ==> ____ ==> ____
Text in Title ==> _____ from Column ==> 0_ (0 - 80)
Browser Notes ==> ____ (Y)es,(N)o

Press ENTER to update the definition. Press DOWN to display the next page, or
UP to display the previous page. Press END to return to the previous panel.
    
```

Fields

The fields of this panel are used to set defaults for the first page of the List/Report Selection panel. For a description of each field, refer to the field descriptions of the List/Report Selection panel (see page 40).

When you leave a field blank, the corresponding ISPF variable will not be redefined. In this case, the field will be initialized with the value that was present in this field at the end of the previous Adabas Audit Data Retrieval session.

The fields **Form**, **Extension**, **Report**, **Jobname**, and **Folder** have two additional fields next to them:

- Specify **Yes** in the **Required** field to make a field required.
- Specify **Yes** in the **Disabled** field to block this field.

Examples

```

Jobname      ==> _____ Required Disabled
              ==> YES ==> ____
    
```

The **Jobname** field is a required field for this user. The user can specify a mask, if the mask has more characters than just an asterisk (*).

```

Jobname      ==> B97*_____ Required Disabled
              ==> YES ==> ____
    
```

Same as above. In addition, the **Jobname** field is populated with the value **B97*** the first time the List/Report Selection panel is displayed after the user has logged on, but the user can change this value any time.

```

Jobname      ==> B97*_____ Required Disabled
              ==> ____ ==> YES
    
```

When the user logs on, the **Jobname** field is populated with the value **B97***. The user cannot change this value. The user can display only lists whose creating job begins with **B97**.

```

Jobname      ==> _____ Required Disabled
              ==> YES ==> YES
    
```

This does not make sense: each selection of the user will lead to the error message **Selection * not allowed**, but the user is unable to specify a jobname.

**User definition panel
(Page 3)**

```

PE97VC12 ----- Page 3 of 5
Command ==> _____

Variables for Displaying Lists or Reports (Option 1 & I) for User ID: STANDARD

Optional Selection Criteria:

Layout          ==> _____ (J)ob,(L)ist,(S)tatus
Display with Title ==> _____ (Y)es,(N)o
Select by Type   ==> _____ (L)ist,(R)eport,(A)ll
Select by Online ==> _____ (Y)es,(N)o
Select by Archive ==> _____ (Y)es,(N)o,archive (P)ending
Marked for Viewable ==> _____ (Y)es,(N)o,(A)ll
Marked for Reload ==> _____ (Y)es,(N)o
Marked for Delete ==> _____ (Y)es,(N)o
Sort Order       ==> _____ (A)scending,(D)escending
By Primary Key   ==> _____ (D)ate and Time, (J)obname,
Secondary Key    ==> _____ (F)orm,(E)xtension,(R)eport,(T)itle
Execute the Macro ==> _____ ((Y)es,(N)o

Press ENTER to update the definition. Press DOWN to display the next page, or
UP to display the previous page. Press END to return to the previous panel.
    
```

Fields

The fields in this panel are used to populate the fields of page 2 of the List/Report Selection panel. For a description of each field, refer to the field descriptions of the List/Report Selection panel (see page 40).

**User definition panel
(Page 4)**

```

PE97VC13 ----- Page 4 of 5
Command ==> _____

Variables for Displaying Lists or Reports (Option G ) for User ID: STANDARD

Owner          ==> _____ Required ==> ___ Disabled ==> NO_
Folder Group   ==> _____ Required ==> ___ Disabled ==> ___

Press ENTER to update the definition. Press DOWN to display the next page, or
UP to display the previous page. Press END to return to the previous panel.
    
```

Fields

The fields in this panel are used to populate the Global Index Search panel.

User definition panel (Page 5)

```

PE97VC14 ----- Page 5 of 5
Command ==> _____

Browser Options Variables for User ID: STANDARD

Display Mode          ==> P      (E)xtended, (P)age
Transaction Mode      ==> N      (Y)es, (N)o
Bottom Markers        ==> N      (Y)es, (N)o
Full Display          ==> N      (Y)es, (N)o
Find Line Limit       ==> 1000__ (0 - 999999)
Replace Exclude Columns ==> N      (Y)es, (N)o
Exclude Replacement Char ==> ^
Display Object Info   ==> N      (Y)es, (N)o

Store the variables above to user profile ==> YES  (Y)es, (N)o

Press ENTER to update the definition. Press UP to display the previous page.
Press END to return to the previous panel.

```

Fields

The fields in this panel are used to set options for the Beta Browser. For more information on the fields, see the field descriptions of the Browse Options Definition panel (see page 181).

If you want the fields on this page to be ignored, specify **No** in the **Store the variables above to user profile** field. In this case, only the values that affect Adabas Audit Data Retrieval (page 1 through 4 of the user definition) will be used.

Creating a view definition (Option C.2)

Overview

Definitions under option **C.2** are not used by Adabas Audit Data Retrieval.

Layouts for the List/Report Selection table

Overview

The display of the List/Report Selection table under option **1** is controlled through **Layouts**. Here, one must differentiate between three types of layouts:

1. The layouts, which are administered under option **C.3**
2. The layouts **Job**, **List** and **Status**, which exist in Adabas Audit Data Retrieval and can not be changed
3. User-defined layouts

Each user can define an own layout. This layout (PRIVATE) is displayed if the user enters the value **User** in the **Layout** field on page 2 of the "Select Lists or Reports" panel.

Available layouts

As the administrator, you determine which layouts should be used for the "List/Report Selection Table" display:

- The administrator-defined layouts from option **C.3**

These layouts are used if the following applies to the current language of the user: at least one of the layouts defined under option **C.3** is active.

- The three non-changeable layouts of the system -- **Job**, **List** and **Status**

These layouts are used if the following applies to the current language of the user: none of the layouts defined under option **C.3** is active.

Independent of this, user-defined layouts are basically always available.

Behavior under option 1 with job/list/status

The three unchangeable layouts **Job**, **List** and **Status** are available if no administrator-defined layout is active in the current language of the user. In this case, the following behavior applies under option **1**:

- By entering **Job**, **List** or **Status** in the **Layout** field on page 2 of the "Select Lists or Reports" panel, the user determines with which of these layouts the "List/Report Selection Table" will be displayed.
- You can switch between the three layouts in the "List/Report Selection Table" with the PF10 (LEFT) and PF11 (RIGHT) keys.

**Behavior under option 1
with administrator-
defined layouts**

The following behavior applies under option **1** if at least one of the layouts defined under option **C.3** is active in the current language of the user:

- The selection between the administrator-defined layouts is carried out exclusively with the PF10 (LEFT) and PF11 (RIGHT) keys.
- When the session ends, the layout which was active last is stored in the user profile. In the next session, this layout is automatically used for this user when the "Select Lists or Reports" panel is displayed.
- The **Layout** field on page 2 of the "Select Lists or Reports" panel serves exclusively to allow the selection of the user-defined layout. The corresponding field in the user-definition (option **C.1**) has no function.

**Default settings after
installation**

The following default applies during the installation:

- Four active layouts exist under option **C.3** for each language supported by Adabas Audit Data Retrieval: **Job**, **List**, **Status** and **Archive**.
- The layouts **Job**, **List** and **Status**, in structure, correspond to the known non-changeable layouts. The additional layout **Archive** with information on the archival of lists/reports serves as an example and proposal for creating own layouts.

Administrator-defined layouts (Option C.3)

Navigation

From the "Primary Selection Menu", choose:

- Option C.3

The "Select List/Report Selection Table Layout Definition" panel is displayed, in which you can enter your selection criteria.

Display List/Report Selection Table Layout Definition table

```

PE97LY05 ----- Row          1 of      4
Command ==> _____ Scroll ==> PAGE

Display List/Report Selection Table Layout Definition      ( LEFT/RIGHT )

  S - Select      I - Insert      C - Copy      D - Delete
  A - Activate    UA - Deactivate

Sel  No Layout Name      L Title              Status  Type
 10 LIST                E LIST RELATED INFORMATION  ACTIVE  BETA
 12 STATUS              E STATUS RELATED INFORMATION  ACTIVE  BETA
 14 JOB                  E JOB RELATED INFORMATION    ACTIVE  BETA
 16 ARCHIVE             E ARCHIVE RELATED INFORMATION  ACTIVE  BETA
***** BOTTOM OF DATA *****
    
```

Line commands

The following line commands are available in the "Display List/Report Selection Table Layout Definition" table

- S** Display or edit layout definition
- I** Insert a layout definition
- C** Copy a layout definition
- D** Delete a layout definition
- A** Activate an inactive layout definition
- UA** Deactivate an active layout definition

Notes on the maintenance of administrator-defined layouts

Note the following general instructions for maintaining layouts under option **C.3**:

- Type** The layouts delivered by Beta Systems are of the type **BETA**. You cannot change the structure of these layouts. You can, however, take these layouts as a template for your own layouts (type: **CUST**).
- Language** If you customize existing layouts or create new layouts, you should carry out these changes for all languages which are used by the users of your system. Layouts for languages which are not used in your system need not be customized.
- Number** The number determines the sequence of the layouts while scrolling. The following must be unique:
 The combination of **Number** and **Language**
 The combination of **Number** and **Layout Name**
 The application saves the position of the last active layout in the user-profile at the end of the session. If you subsequently insert a new layout definition, you should use higher numbers for the layout.
- Delete** Only inactive layout definitions can be deleted.
- Activate** Only the active layouts of the current language are available under option **1** (maximum 10).
 If more administrator-defined layouts are active for a language, only the first 10 are used.

Insert Layout Definition panel

```

PE97LY10 -----
Command ==> _____

Insert Layout Definition

Layout Name ==> ..... Type : CUST
Language   ==> E           (E - English, G - German)
Number     ==> 10          (1 - 99)
Status     ==> INACTIVE   (A)ctive, (I)nactive
Title      ==> _____
Owner      ==> _____

Press ENTER to insert the definition. Press DOWN to display the next page.
Press END to return to the previous panel.
    
```

Fields

Field	Description
Layout Name	Name of the layout. The combination of Layout Name and Language must be unique.
Language	Determines for which user language the layout is used. Possible values are: E English G German The combination of Language and Number must be unique.
Number	This number determines the position of the layout when scrolling (PF10/PF11) under option 1.
Status	Active or Inactive
Title	Descriptive title
Owner	The owner name (optional, max. 8 characters) can be used for grouping definitions. The owner name is available to the security exit and can be used to simplify security definitions in RACF. In computing services data centers, it can be used to keep customer data separate. The owner is available in the security exit.

List/Report Selection Table Layout

```

PE97LY95 ----- Row 1 to 8 of 32
Command ==> _____ Scroll ==> PAGE

List/Report Selection Table Layout

Pos = Field position  A      = Attribute (H)ighlighted, justified (R)ight
Len = Field length   Header = Table header text

Line command column width ==> 6  (3 or 6)

Enter  SAVE  in the command line to store the layout in the database.

Layout:

Pos A Len Max.Len Header          Default Header  Description
.. _ 10  10  Date_____ Date            Beta97 read-in date
.. _ 11  11  Time_____ Time            Beta97 read-in time
.. _ 8   8   Form_____ Form            Form name
.. _ 16  16  Extension_____ Extension        Extension name
.. _ 16  16  Report_____ Report          Report name
.. _ 7   7   Status_____ Status          Online/Offline
.. _ 7   7   Pages_____ Pages           Number of pages
.. _ 10  10  Lines_____ Lines           Number of lines
    
```

Fields

Field	Description
Line command column width	Determines the width of the Sel -column Enter the value 6 , if the line command entered last should be visible (History-function)
Pos	Desired position of this column in the table
A	Legal values are: H Highlighted display R Right-justified display <i>(blank)</i> Left-justified display, no highlighting
Len	Length to be used for displaying this field (The value must be less or equal to the values displayed under Max.Len)
Header	Column header (If you leave this field blank, the Default Header will be inserted automatically when you save the layout)

Notes on changing and saving a layout

The first column of a layout is reserved for the **Sel** column. You can determine the width of the column (3/6 = without/with History). Type an appropriate value in the **Pos** column and press ENTER to add the corresponding column to your layout.

When you press ENTER in the "List/Report Selection Table Layout" panel, the fields are re-sorted according to the specified position so that the selected fields are displayed at the top of the table. The line below **Layout** shows the current arrangement of the columns that you have selected for your layout. If you press PF3, you leave the panel without saving any changes. A message will inform you of this. In order to save changes to the layout, you must enter the primary command **SAVE** in the command line.

Example: Inserting a new layout

Overview

In this example, a new layout is created for the title display. The layout should contain the columns **Date**, **Time** and the maximum possible number of characters of the **Title**.

Instructions

You create a new layout as follows:

1. Enter the line command **I** or **C** in front of a layout in the "Display List/Report Selection Table Layout Definition" table.
2. Enter the desired values in the displayed panel.

```

PE97LY10 -----
Command ===> _____

Insert Layout Definition

Layout Name ===> TITLE..... Type : CUST

Language ===> E (E - English, G - German,
                F - French , I - Italian)
Number ===> 10 (1 - 99)

Status ===> INACTIVE (A)ctive, (I)nactive

Title ===> TITLE DISPLAY_____

Owner ===> _____

Press ENTER to insert the definition. Press DOWN to display the next page.
Press END to return to the previous panel.
    
```

3. Press PF8.

The "List/Report Selection Table Layout" panel is displayed, where you can determine the columns for your layout.

```

PE97LY95 ----- Row 1 of 34
Command ===> _____ Scroll ===> PAGE

List/Report Selection Table Layout

Pos = Field position A = Attribute (H)ighlighted, justified (R)ight
Len = Field length Header = Table header text

Line command column width ===> 6 (3 or 6)

Enter SAVE in the command line to store the layout in the database.

Layout:

Pos A Len Max.Len Header Default Header Description
.. _ 10 10 Date_____ Date Beta97 read-in date
.. _ 11 11 Time_____ Time Beta97 read-in time
.. _ 8 8 Form_____ Form Form name
.. _ 16 16 Extension_____ Extension Extension name
.. _ 16 16 Report_____ Report Report name
.. _ 7 7 Status_____ Status Online/Offline
.. _ 7 7 Pages_____ Pages Number of pages
.. _ 10 10 Lines_____ Lines Number of lines
    
```

- Enter the desired column position in front of the respective fields in the **Pos** column. In addition, you can also enter an attribute (**H** or **R**), the column width and the column header. If required, you can scroll down with PF8 until the desired field is displayed.

```

PE97LY95 ----- Row 23 of 34
Command ==> _____ Scroll ==> PAGE

List/Report Selection Table Layout

Pos = Field position  A      = Attribute (H)ighlighted, justified (R)ight
Len = Field length   Header = Table header text

Line command column width ==> 6  (3 or 6)

Enter SAVE in the command line to store the layout in the database.

Layout:

Pos A Len Max.Len Header          Default Header  Description
..  _ 4_  4  A_____  A              In AFPDS format
..  _ 4_  4  T_____  T              Contains TRC records
03  _56 70  Title_____  Title          List/Report title
..  _ 4_  4  >32K_____ >32K          List/Report pages > 32K
..  _ 4_  4  ItmP_____ ItmP           In item processing mode
..  _ 4_  4  ItmD_____ ItmD           In item display mode
..  _16 16  Layout_____ Layout         Layout for index retrieval
..  _10 10  ArcExpDate_____ ArcExpDate     Archive expiration date
    
```

- Press ENTER to update the preview of the **Layout**.

```

PE93LY95 ----- Row 1 of 34
Command ==> _____ Scroll ==> PAGE

List/Report Selection Table Layout

Pos = Field position  A      = Attribute (H)ighlighted, justified (R)ight
Len = Field length   Header = Table header text

Line command column width ==> 3  (3 or 6)

Enter SAVE in the command line to store the layout in the database.

Layout:
Sel.Date  .Time .Title .
    
```

Pos	A	Len	Max.Len	Header	Default Header	Description
01	_ 8_	10	Date_____	Date	Beta97 read-in date	
02	_ 5_	11	Time_____	Time	Beta97 read-in time	
03	_56	70	Title_____	Title	List/report title	
..	_ 8_	8	Form_____	Form	Form name	
..	_16	16	Extension_____	Extension	Extension name	
..	_16	16	Report_____	Report	Report name	
..	_ 7_	7	Status_____	Status	Online/Offline	
..	_ 7_	7	Pages_____	Pages	Number of pages	

The period in the right-hand margin displays how many of the maximum 80 columns are already being used. In the example, the title can be extended by 4 characters.

6. Enter the primary command **SAVE** to save the new layout.

```

PE97LY95 ----- Row 1 of 34
Command ==> SAVE Scroll ==> PAGE

List/Report Selection Table Layout

Pos = Field position A = Attribute (H)ighlighted, justified (R)ight
Len = Field length Header = Table header text

Line command column width ==> 3 (3 or 6)

Enter SAVE in the command line to store the layout in the database.

Layout:
Sel.Date .Time .Title

Pos A Len Max.Len Header Default Header Description
01 _ 8_ 10 Date_____ Date Beta97 read-in date
02 _ 5_ 11 Time_____ Time Beta97 read-in time
03 _ 60_ 70 Title_____ Title List/report title
.. _ 8_ 8 Form_____ Form Form name
.. _ 16_ 16 Extension_____ Extension Extension name
.. _ 16_ 16 Report_____ Report Report name
.. _ 7_ 7 Status_____ Status Online/Offline
.. _ 7_ 7 Pages_____ Pages Number of pages
    
```

7. Press PF3 to exit the panel.

The message **INSERT SUCCESSFUL** appears in the upper right hand corner of the panel.

Note: A newly inserted layout is inactive by default. In order to use this layout, you must activate it first, for example, by changing the value in the **Status** field of the displayed panel.

System options (Option S)

In this chapter	Topic	Page
	Remote subsystem definition (Option S.1)	205
	Adabas Audit Data Retrieval subsystem definition (Option S.2)	206
	Batch Job Selection Menu (Option S.3)	211
	_beta report batch jobs (Option S.4)	213

Remote subsystem definition (Option S.1)

Overview

Definitions under option **S.1** are not used by Adabas Audit Data Retrieval.

Adabas Audit Data Retrieval subsystem definition (Option S.2)

Function The Adabas Audit Data Retrieval subsystem options record contains general parameters for the Adabas Audit Data Retrieval subsystem. If several Adabas Audit Data Retrieval subsystems share one database, there must be one subsystem options record for each Adabas Audit Data Retrieval subsystem.

Defining subsystem options The installation REXX creates a subsystem options definition according to your specifications at the time of installation. This definition is inserted when setting up the Adabas Audit Data Retrieval database. Use option **S.2** to modify these settings or to insert an additional subsystem options record, for example, when defining a second Adabas Audit Data Retrieval subsystem.

Navigation From the Primary Selection Menu, choose option **S.2** to display a selection panel. Press ENTER to display a list of the subsystem options records defined in the Adabas Audit Data Retrieval database.

The Adabas Audit Data Retrieval subsystem options record consists of four pages. To display or modify a record, do one of the following:

- Enter line command **S** to display the first page of the subsystem options record and press PF8 to scroll to the subsequent pages.
- Enter one of the displayed numeric line commands to jump directly to the pages 2 through 4 of the subsystem options record.

Table of subsystems

```

PE97SY05 ----- Row      1 of      1
Command ==> _____ Scroll ==> CSR_

Display System Definitions                ( LEFT/RIGHT )

S - Select   I - Insert   C - Copy     D - Delete   V - Verify

Processing Parameters:   1 - Online   2 - Batch    3 - Xerox

Sel  System  Location      Pr Net Id  SSID  Last Changed
    B97PROD  BERLIN      97 DEBETA01 B97P  09/05/2000 09:30:38 B97ADM
***** BOTTOM OF DATA *****
    
```

Fields (Page 1)

Field	Description
System Name	Identifies the subsystem The system name must be unique and may be up to 8 characters long.
Title / System Description	Descriptive title of the subsystem (optional)
System Location	Specifies the physical location (city) of the subsystem (max. 16 characters)
BETA Product Number	Always 97
Net ID	Displays the Net ID
Subsystem ID	Displays the Adabas Audit Data Retrieval subsystem ID The subsystem ID is determined at the time of the installation of Adabas Audit Data Retrieval. It may be up to four characters in length and must be unique. Refer to the <i>Adabas Audit Data Retrieval Installation and System Guide</i> for information on defining and initializing subsystems.

Fields (Page 2)

Adabas Audit Data Retrieval uses the values in the fields **Default Primary Panel**, **Default User Name**, **Browse Only**, and **System Language** for the automatic creation of new records in the VCI table if the VCI table does not have a record under the user ID STANDARD. For more information, see "User profiles defined by the administrator" on page 187.

Field	Description
Default Primary Panel	Default value for the Entry Panel field when creating a new record in the VCI table (max. 8 characters; the second character is the language character, for example E for English or G for German)
Default User Name	Default value for the User Name field when creating a new record in the VCI table
Browse Only	Default value for the Browse Only field when creating a new record in the VCI table (Yes or No)
System Language	Default value for the Language field when creating a new record in the VCI table (English or German)
Work Days per Week	In this field you can specify the number of workdays per week. This number is used when calculating online expiration dates for lists. The default is 7.
System Date Mask	Defines the date format to be used in the reports created by batch utilities
Lines Per Page	Defines the number of lines per report page

Fields (Page 3)

Field	Description
Definition Database Name	Name of the Adabas Audit Data Retrieval database definition file
BETA Parmlib	<p>Name of the BETA.PARMLIB where the members B97LSTxx and B01LSTxx are stored. These members contain parameters used by the Adabas Audit Data Retrieval started task, the Adabas Audit Data Retrieval reader, and the Adabas Audit Data Retrieval batch utilities.</p> <p>These values are used for the generation of JCL.</p> <p>Example: SFF Parm library = BETA.PARMLIB BETA01 LST member = 99 BETA97 LST member = X1 The JCL tailored by Adabas Audit Data Retrieval specifies to use the parameters in the members BETA.PARMLIB(B01LST99) and BETA.PARMLIB(B97LSTX1).</p> <p>For more information on the BETA.PARMLIB and LST members, see "How to use LST parameters" in <i>Adabas Audit Data Retrieval Installation and System Guide</i>.</p>
B01LST	Number or character combination that identifies the B01LSTxx member in the BETA.PARMLIB. This field is required. For a list of parameters, see <i>BSA Installation and System Guide</i> .
B97LST	Number or character combination that identifies the B97LSTxx member in the BETA.PARMLIB. This field is required. For a list of parameters, see "LST parameters in B97LSTxx" in <i>Adabas Audit Data Retrieval Installation and System Guide</i> .
Step Library 1 - 4	Names of up to four load libraries
Panel Library	<p>Name of the default library for (user-defined) panels; the panels are used for the generation of RPG batch reports (option S.4)</p> <p>By default, this field specifies the name of the BETA97.ISPPLIB. You can specify a different panel library for each RPG batch report definition under option S.4.</p>

Field	Description
Skeleton Library	Name of the default skeleton library; the skeletons are used for the generation of RPG batch reports (option S.4) By default, this field specifies the name of the BETA97.ISPSLIB. If you use skeletons that are not stored in the BETA97.ISPSLIB, specify the name of the library where these skeletons are stored.
Perform LIBDEFs	Determines whether the specified panel library and skeleton library are allocated dynamically when generating _beta report batch reports (option S.4) Yes The panel library and skeleton library are allocated dynamically using ISPF LIBDEF service. No All libraries containing user-defined panels and skeletons must be pre-allocated.

Fields (Page 4)

Field	Description
DJDE identification	Specify Dormant in the DJDE identification field because scanning for XEROX DJDE (Dynamic Job Descriptor Entries) statements is not meaningful in Adabas Audit Data Retrieval.
Prefix	Not used
Offset	Not used
Skip	Not used

Batch Job Selection Menu (Option S.3)

JCL for batch utilities

Tailored JCL for Adabas Audit Data Retrieval batch utilities can be found in the BETA97.CNTL.

You can also generate JCL online for selected batch utilities using the "Batch Job Selection" menu.

Navigation

From the "Primary Selection Menu" choose:

- Option **S.3**

The "Batch Job Selection Menu" panel is displayed, where you can choose the batch utility.

Option	Batch utility
D	Daily job (see page 264)
1	Archive utility (see page 227)
2	Reload utility (see page 305)
3	Online cleanup utility (see page 280)
4	Archive cleanup utility (see page 269)
5	Message log cleanup utility (see page 275)
6	Cache cleanup utility (see page 273)
7	Notes cleanup utility (see page 278)

Batch Job Selection Menu

```

PE97BAT0 -----
--
Option ==>> _____

Batch Job Selection Menu                               System - B97PROD
                                                       Location - BERLIN
                                                       Subsys-ID - B97P
                                                       User ID - B97USER

D DAILY - Generate Batch Job for Archiving and Cleanup

1 ARCHIVE - Generate Batch Job for Archiving
2 RELOAD - Generate Batch Job for Reload

3 ONL-CLEANUP - Generate Batch Job for Online Cleanup
4 ARC-CLEANUP - Generate Batch Job for Archive Cleanup
5 LOG-CLEANUP - Generate Batch Job for Log Messages Cleanup
6 CCH-CLEANUP - Generate Batch Job for Cache Cleanup
7 NTE-CLEANUP - Generate Batch Job for Notes Cleanup

Select one of the above options. Press END to return to the previous menu.

```

Generating JCL online

When generating JCL online, Adabas Audit Data Retrieval tailors the JCL using the following:

- Skeletons from the BETA97.ISPSLIB (skeleton library)
- Jobcard from your user profile (Option **P.3**)
- Values for load libraries, parameter library, and LST members specified in the subsystem options record (Option **S.2**)

The generated JCL is displayed in the ISPF editor, which you can use to modify, save, or submit the JCL. To submit the job, enter the primary command SUBMIT or SUB.

EXEC statement

```
+-----+
|//stepname EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97pgm',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|...
+-----+
```

EXEC PGM=BST01RFF indicates that the batch job runs in an RFF environment (RFF = Remote Function Facility). All product batch utilities run in this fashion.

EXEC parameter

PARM=('...') specifies which function is to be performed when the program BST01RFF is started. Following is a list of the parameters that may be coded.

Parameter	Description
S=97	Product number (97 is the identifier of Adabas Audit Data Retrieval)
PGM= <i>name</i>	Name of the program to be executed
B01LST= <i>xx</i> B97LST= <i>xx</i>	BETA.PARMLIB members whose parameters should be used
SIGNON=YES NO	<p>YES The batch utility accesses the database via the product STC. The product STC must be active when the batch utility is started. SIGNON=YES is the default.</p> <p>NO The batch utility requests exclusive access to the product database. The product STC must be inactive when the batch utility is started.</p>

These parameters apply to all product batch utilities. For information on parameters that are special to individual batch utilities refer to the description of the corresponding batch utility.

_beta report batch jobs (Option S.4)

Overview

You can use option **S.4** to generate JCL for _beta report batch jobs.

Adabas Audit Data Retrieval provides several skeletons and panels for the generation of JCL. You can copy these skeletons and modify them according to your needs. Adabas Audit Data Retrieval distinguishes between the reports that are provided with Adabas Audit Data Retrieval (report type **System**) and user-defined reports (report type **User**).

Generating JCL

To generate JCL for a _beta report batch job:

1. From the Primary Selection Menu, choose option **S.4**.
2. Type selection criteria in the displayed panel and press ENTER.

This will display the available reports in a table:

```

PE97RP05 ----- Row      1 of      7
Command ==> _____ Scroll ==> CSR_

Display Batch Report Definitions          ( LEFT/RIGHT )

  S - Select   I - Insert   C - Copy     D - Delete   G - Generate

Sel  Report Name      Report Title                                     Type
-----
ARCHIVE_001  ARCHIVE POOLS AND THEIR SUBPOOLS                SYST
ARCHIVE_002  ARCHIVE DATASETS                                SYST
ARCHIVE_003  ARCHIVED LISTS                                  SYST
ARCHIVE_004  LIST RELATED ARCHIVE INFORMATION                SYST
INDEX_000    USAGE OF LIST INDEX DEFINITIONS                SYST
INDEX_001    USAGE OF LIST INDEX DEFINITIONS                SYST
REPORT_000   RPG BATCH REPORTS: LIBRARIES AND MEMBERS        SYST
***** BOTTOM OF DATA *****

```

3. Enter the line command **G** in front of the desired report.

This will display an additional panel for the corresponding report, where you can specify more values.

```

PE97RPA2 -----
Command ==> _____

Report about Archive Datasets              Table(s) : AGR

Pool Name          ==> POOL1_____ Name or Mask
Pool Owner         ==> CUST001_____ Name or Mask

Sorted by          ==> 1   1 Volume, Dataset Name
                   2   2 Volume, File Sequence Number
                   3   3 Expiration Date

Output Dataset     ==> B97ADM.TEST_____

Press the ENTER key to generate the batch job.
Press the END key to return to the previous menu.

```

- Press ENTER to generate JCL using the values you typed in the panel and the skeletons specified for this report.

This will display the tailored JCL in the ISPF editor.

Modifying batch report definitions

You can make your own batch report definitions under option **S.4**, for example, by modifying the definitions provided by Adabas Audit Data Retrieval. New and modified report definitions are of the report type **User**.

Batch Report Definition panel

```

PE97RP10 -----
Command ==> _____

Insert Batch Report Definition

Report Name          ==> INDEX_000.....          Report Type   : USER
Report Title         ==> USAGE OF LIST INDEX DEFINITIONS FOR OWNER CUST001_
Owner                ==> B97ADM_

Panel Library        ==> _____
Skeleton Library     ==> _____

Panel Id             ==> PE97RPI0             LangUse       Tailor
JCL Member           ==> SX97JRPG             ==> YES       (Y)es,(N)o
Skeleton 1           ==> SE97RP$$             ==> NO_       (Y)es,(N)o
Skeleton 2           ==> SE97RPI0             ==> YES       ==> NO.     (Y)es,(N)o
Skeleton 3           ==> SE97RPI0             ==> YES       ==> NO_     (Y)es,(N)o
Skeleton 4           ==> SX97RPI0             ==> NO_       ==> NO_     (Y)es,(N)o
                    ==> _____             ==> NO_       ==> NO_     (Y)es,(N)o

Press the ENTER key to insert the definition.
Press the END key to return to the previous panel.

```

Fields

Field	Description
Report Name	Name (max. 16 characters)
Report Title	Descriptive title (max. 50 characters)
Owner	Owner
Panel Library	Name of the library containing the panel specified in the Panel ID field
Skeleton Library	Name of the library containing the skeletons specified in the Skeleton n fields
Panel ID	This panel will be displayed after entering the line command G ; it is used to specify variable values, for example, selection criteria.
JCL Member	Member containing the JCL for the batch job
Skeleton n	Members containing the required statements for _beta report
LangUse	<p>No When Adabas Audit Data Retrieval looks for the specified panel or skeleton, it uses the member name exactly as it has been typed in the field</p> <p>Yes When Adabas Audit Data Retrieval looks for the specified panel or skeleton, it replaces the second character in the member name with the current language character</p>
Tailor	<p>Yes Tailoring inserts the statements of the skeleton in the generated JCL</p> <p>No Tailoring inserts a DD statement for the skeleton in the generated JCL</p>

Message log (Option M)

Overview

Adabas Audit Data Retrieval started tasks and batch utilities write messages which have the prefix IRM. These messages are written to JES and to the Adabas Audit Data Retrieval message database.

You can display the messages in the Adabas Audit Data Retrieval message database online. How to do this is described in this section.

To delete obsolete messages from the database, the log messages cleanup batch utility (B97DELOG) should be run at regular intervals. For more information on this batch utility, see "B97DELOG: Log messages cleanup batch utility" on page 275.

Displaying the message log

To display Adabas Audit Data Retrieval messages online:

1. From the Primary Selection Menu, choose option **M**.
2. Enter selection criteria in the displayed selection panel and press ENTER.
 - You must enter values either in the **Select from Last** or in the **Start/End Date** fields.
 - All other fields are optional.

Select Log Messages panel

```

PE97MS00 -----
Command ==> _____

Select Log Messages

Select from Last      ==> __ hours__ 01-99 (H)ours or (M)inutes
                        or blank to define Start/End

Start Date (MM/DD/YYYY) ==> MONDAY____ Start Time ==> .....
End Date (MM/DD/YYYY) ==> MONDAY.... End Time ==> .....

Optional Selection Criteria:

Message Number ==> IRM1700...
Message Text ==> .....

Press the ENTER key to display the message log table.
Press the END key to return to the previous menu.
    
```

Fields

Field	Description
Select from Last / Start/End Date / Start/End Time	Enter values to select messages that were logged within the specified time range. For more information on legal values, see the field descriptions of the List/Report Selection panel in "List/Report Selection Panel (Option 1)" on page 40.
Message Number	Enter a message number including the prefix or a mask.
Message Text	Enter a string or a mask.

Example

Enter the following to display all warning messages of the previous day:

- Start Date = Yesterday
- End Date = Yesterday
- Message Number = IRM%%%%%W

Log Messages table

```

PE97MS05 ----- Row      1 of      6
Command ==> _____ Scroll ==> CSR_

Display Log Messages

Date      Time      Msg-ID  Message Text
01/18/2021 08:45:06 IRM7004W SERVER : SELECT TIMEOUT
01/18/2021 08:45:08 IRM7004W SERVER : SELECT TIMEOUT
01/18/2021 08:45:09 IRM7004W SERVER : SELECT TIMEOUT
01/18/2021 08:45:11 IRM7004W SERVER : SELECT TIMEOUT
01/18/2021 08:45:13 IRM7004W SERVER : SELECT TIMEOUT
01/18/2021 18:18:59 IRM1718W INDEX EXTRACTION OUT OF RECORD BOUNDARY ON PAGE 12
***** BOTTOM OF DATA *****
    
```

You can use PF11 (RIGHT) and PF10 (LEFT) for horizontal scrolling in order to display messages that are longer than the column width.

Batch utilities

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Overview

Introduction

Adabas Audit Data Retrieval provides batch utilities for numerous tasks, for example:

- Database maintenance (housekeeping)
- Downloading/Uploading data from/into the database
- Archiving and reloading of lists/reports

Following is a list of the available batch utilities with a short description.

Maintenance (Housekeeping)

B97DEONL — Online Spool Cleanup Batch Utility (see page 280)

Deletes lists/reports and their indexes from the Adabas Audit Data Retrieval online spool (because their online expiration date has expired or because the generation record has been marked for deletion)

B97DECCH — Cache Cleanup Batch Utility (see page 273)

Deletes lists/reports from the Adabas Audit Data Retrieval cache spool after their retention period has expired

B97DENTE — Notes Cleanup Batch Utility (see page 278)

Deletes notes from the Adabas Audit Data Retrieval database

B97DELOG — Log Messages Cleanup Batch Utility (see page 275)

Deletes entries from the MSG database

B97DEARC — Archive Cleanup Batch Utility (see page 269)

Deletes records of list/report generations from the Adabas Audit Data Retrieval database after their archive expiration date has expired

Download/Upload

B97DLOAD — Download Batch Utility (see page 290)

Downloads data from the Adabas Audit Data Retrieval database (You can make the program write the data to a dataset, for example, in order to upload the data later.)

B97BUTLT — Upload Batch Utility (see page 256)

Reads data from a sequential dataset and inserts, updates, or deletes appropriate records in the Adabas Audit Data Retrieval database

Archive and Reload**B97ARC — Archive Batch Utility** (see page 227)

Archives lists and index data according to what has been specified in the list definitions and in the archive pool definitions

B97AXPDT — Archive Expiration Date Batch Utility (see page 232)

Carries out the necessary updates in the Adabas Audit Data Retrieval database after archive expiration dates have been changed using line command **E** or **B97BUGEN** when extending the archive retention period or using **B97BUGEN** when reducing the archive retention period (Important when extending the archive retention: **B97AXPDT** only carries out the changes that are required in the Adabas Audit Data Retrieval database; you must ensure that retention periods of the affected datasets and media in your management system (TMS, SMS, HSM) are extended accordingly.)

B97RLD — Reload Batch Utility (see page 305)

Reloads archived lists/reports and indexes from archive media (for example, disk or tape) into the corresponding spool

B97BRLD — Reload Request Batch Utility (see page 236)

Generates requests for reloading lists and their indexes from the archive

B97MRLD — Mass Reload Batch Utility (see page 299)

Reloads all lists that have been archived in the specified archive datasets into the Adabas Audit Data Retrieval online spool

Other**B97DAILY — Daily Job** (see page 264)

Includes the archive batch utility and maintenance jobs

B97BSTAT — Generation Select Batch Utility (see page 241)

Outputs information on selected generations of lists/reports

B97BUGEN — Update Generation Record Batch Utility (see page 248)

Enables you to change certain fields in the generation records of selected lists/reports

B97DBVER — Database Verification Batch Utility (see page 265)

Verifies the presence of database updates

B97GLOBL — Global Index Batch Utility (see page 295)

Updates the global indexes

JCL

Overview

To run a batch utility, you can use the JCL from the BETA97.CNTL. This JCL has been tailored during the installation for the names of libraries and databases used by your Adabas Audit Data Retrieval system.

Alternatively, you can use online option **S.3** to generate JCL for a number of Adabas Audit Data Retrieval batch utilities. This process tailors JCL from a skeleton using the names of libraries and databases specified in the subsystem options record.

Standard JCL structure

This is the standard JCL structure which applies to most Adabas Audit Data Retrieval batch utilities.

```

+-----+
|jobcard
|//stepname EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97xxx',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'B97_SSID=ssid',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//B97DEF DD DISP=SHR,DSN=BETA97.DB.DEF
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//*
|//SYSPRINT DD SYSOUT=*
|//IRMLLOG DD SYSOUT=*
|//IRMPRINT DD SYSOUT=*
|//IRMERROR DD SYSOUT=*
|//*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//*
|//SYSIN DD *
|parameters
|/*
+-----+

```

If SIGNON=YES, it is okay for most Adabas Audit Data Retrieval batch utilities to use DUMMY in the DD statement B97DEF of the database definition file:

```

+-----+
|...
|//B97DEF DD DUMMY
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|...
+-----+

```

For more information, see "B97DEF DD DUMMY" on page 223.

DD statements and parameters, which are used only by individual batch utilities, are described in the section of the corresponding batch utility.

Remote Function Facility (RFF) EXEC PGM=BST01RFF indicates that the batch job runs in an RFF environment (RFF = Remote Function Facility). All Adabas Audit Data Retrieval batch utilities run in this fashion.

EXEC parameter PARM=('...') specifies:

- Which program is to be executed by BST01RFF
- Which parameters are to be used for controlling the execution of this program

The parameters that can be used are listed below.

Parameter	Description
S=97	Product number (for Adabas Audit Data Retrieval it is always 97)
PGM= <i>name</i>	Name of the program to be executed, for example, B97BUTLT or B97DELOG
B01LST= <i>xx</i> B97LST= <i>xx</i>	Specify the BETA.PARMLIB member whose parameters should be used
B97_SSID= <i>ssid</i>	Adabas Audit Data Retrieval Subsystem ID This entry is optional, as the system ID is normally also specified in the B97LST <i>xx</i> member.
SIGNON=YES NO	<p>Yes means that the batch utility accesses the Adabas Audit Data Retrieval database via the Adabas Audit Data Retrieval started task; the Adabas Audit Data Retrieval started task must be active when the batch utility is started (default setting).</p> <p>No means that the batch utility requests exclusive access to the Adabas Audit Data Retrieval database; the Adabas Audit Data Retrieval started task must be inactive when the batch utility is started.</p>

DD statements

DD name	Description
STEPLIB	LOAD libraries (by default BSA.LOAD and BETA97.LOAD)
B97DEF	Database definition file DD DUMMY is okay for most batch utilities (see page 223).
SFFPARM	Parameter library (BETA.PARMLIB) The members B01LSTxx and B97LSTxx must be located in this library.
SYSPRINT	If required, the system messages are written via this DD statement.
IRMLOG	The processing log is written via this DD statement.
IRMPRINT	The results log is written via this DD statement.
IRMERROR	If required, an error log is written via this DD statement.
SFFFDUMP	If required, the subsystem dumps are written via this DD statement.
SYSABEND	If required, the system dumps are written via this DD statement.
SYSIN	This DD statement is used for the specification of the control cards for the function to be executed.

B97DEF DD DUMMY

If SIGNON=YES, it is okay for most Adabas Audit Data Retrieval batch utilities to code B97DEF DD DUMMY in the JCL.

The following batch utilities do **not** work with a DD DUMMY statement, but always require the name of the Adabas Audit Data Retrieval database definition file in the B97DEF DD statement. The submitting user must have CONTROL access to the Adabas Audit Data Retrieval database.

- B97ARC
- B97DEARC
- B97DECCH
- B97DEONL
- B97GLOBL
- B97MRLD
- B97RLD
- BST05ANA
- BST08OCP

Return codes

Overview

This section describes:

- The standard return codes of the Adabas Audit Data Retrieval batch utilities
- How you can control the return code behavior of the batch utilities with the help of the LST parameters

Additional return codes as well as other peculiarities, which only apply to individual batch utilities, can be found in the section in which the specific batch utility is described.

Standard return codes

The following standard return codes apply to all batch utilities:

Symbolic name	RC	Description
BAT_ERR_NODATA	4	No data for processing
BAT_ERR_ERRLIMIT	8	Error limit reached
BAT_ERR_DDMISSING	20	DD statement missing
BAT_ERR_QSAMOPEN	20	Dataset open error
BAT_ERR_BQLOPEN	20	Error during database access initialization
BAT_ERR_BQLEXEC	20	Database access error
BAT_ERR_SYNTAX	20	Syntax error
BQL_ERR_WQERC	24	Communication error (normally: subsystem not available)
BAT_ERR_SECURITY	32	SIGNON=NO and/or ADM required
BQL_ERR_ABEND	32	BQL abend
BQL_ERR_COMMAND	36	BQL command error

Modifying standard return codes

You can control the behavior of the batch utilities regarding a part of the standard return codes with the help of the following LST parameters:

Parameter	Description
B97_BAT_ERR_DDMISSING B97_BAT_ERR_QSAMOPEN B97_BAT_ERR_BQLOPEN B97_BAT_ERR_BQLEXEC B97_BAT_ERR_SYNTAX B97_BAT_ERR_ERRLIMIT B97_BAT_ERR_SECURITY B97_BAT_ERR_NODATA	Sets the return code of the respective error to the specified value Valid values: 0..4095 Note: The following standard return codes cannot be changed: <ul style="list-style-type: none"> • BQL_ERR_WQERC • BQL_ERR_ABEND • BQL_ERR_COMMAND
B97_BAT_RET_MAXCC	Sets the program return code to the specified value (works like SET MAXCC) Valid values: 0..4095
B97_BAT_RET_OKAY	Sets the program return code of non-error to the specified value: Valid values: 0..4095
B97_TRACE_BAT_RC	YES causes the logging of the current values of all modifiable return codes in the IRMLOG Valid values: YES NO

Use

You can control the return code behavior globally by entering the LST parameter in the B97LSTxx member of the system.

Or you can control the return code behavior of individual jobs by entering the LST parameter in the EXEC statement of the JCL, for example:

```
+-----+
|//B97DELOG EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',      |
|//              'PGM=B97DELOG',                          |
|//              'B97_BAT_ERR_NODATA=0',                  |
|//              'SIGNON=YES')                            |
+-----+
```

Logging the values of standard return codes

If the LST parameter B97_TRACE_BAT_RC = YES is coded, the values of the standard return codes including your modified return codes are written to DD IRMLOG:

```

+-----+
|IRM1561I PROGRAM: B97DELOG  VERSION: V7R2M00  PTFVLV: Level    COMPILED: date, time
|IRM2100I LOG-MSG CLEANUP PROCESSING STARTED - DATE: date      TIME: time
|IRM2210I *****
|IRM2210I DFLT_BAT_ERR_DDMISSING = 20
|IRM2210I DFLT_BAT_ERR_QSAMOPEN  = 20
|IRM2210I DFLT_BAT_ERR_BQLOPEN   = 20
|IRM2210I DFLT_BAT_ERR_BQLEXEC   = 20
|IRM2210I DFLT_BAT_ERR_SYNTAX    = 20
|IRM2210I DFLT_BAT_ERR_NODATA    = 4
|IRM2210I DFLT_BAT_ERR_SECURITY  = 32
|IRM2210I DFLT_BAT_ERR_ERRLIMIT  = 8
|IRM2210I DFLT_BAT_RET_OKAY      = 0
|IRM2210I -----
|IRM2210I B97_BAT_ERR_NODATA     = 0
|IRM2210I -----
|...
+-----+

```

In the above example, the program will terminate with RC=0 if it does not find any data for processing (instead of with RC=4).

B97ARC: Archive batch utility

Overview

The archive batch utility (B97ARC) archives lists and index data according to what has been specified in the list definitions and in the archive pool definitions.

Each list that is to be archived is assigned to an archive pool at the run time of the archive batch utility. This assignment is based on the following three criteria:

- Archive retention period
- Archive media
- Owner

Which lists are archived

The archive batch utility archives all lists that have been marked for archive (status "Arch = Pend").

Lists can be marked for archive in the following ways:

- Automatically when reading in the list, which requires that the Adabas Audit Data Retrieval list definition specifies **Yes** in the **Automatic Archive** field
- Manually using the line command **A**

Status of archived lists

After a list and its indexes have been successfully archived, the Adabas Audit Data Retrieval archive batch utility changes the archive status of the list from **Pend** to **Yes**.

Checking archive pool and archive subpool definitions

After program start, the archive batch utility first checks the validity of all archive pool and archive subpool definitions.

Each archive pool and its subpools must fulfill the following conditions to be valid:

- There must be at least one archive subpool whose archive retention period and archive medium is identical to the archive retention period and archive medium of the archive pool.
- The archive retention period of an archive subpool may not be higher than the archive retention period of the corresponding archive pool.

When a definition is invalid

If the archive batch utility comes across an archive pool definition that is invalid, the archive batch utility:

- Archives all lists that have been assigned to valid archive pools
- Does not archive any lists that have been assigned to invalid archive pools (these lists keep their archive status **Pend** (archive pending))
- Ends with a return code other than 0

Running B97ARC

You should run this utility on a daily basis to ensure that newly indexed lists are archived.

Tailored JCL for this job can be found in member B97ARC in the BETA97.CNTL and in the corresponding step of the B97DAILY job.

You can also submit this batch utility online via option **S.3.1**.

This will generate JCL from member SE97ARCH of the BETA97.ISPSLIB (skeleton library).

JCL

```

+-----+
|jobcard
|//B97ARC EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97ARC',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//B97DEF DD DISP=SHR,DSN=BETA97.DB.DEF
|//*
|//SYSPRINT DD DUMMY
|//IRMLLOG DD SYSOUT=*
|//IRMPRINT DD SYSOUT=*
|//*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//*
+-----+

```

Return codes

0 The program terminated normally.

4 This return code can be caused by the following:

- The program did not find any data to be archived.
- The program found one or several invalid archive pool definitions, but no lists were assigned to these invalid archive pools.

The program terminated normally.

>4 One or several errors occurred during processing. Please check the job log for details.

Some return codes are program-specific. Others are standard return codes which can also be modified. More information on standard return codes can be found in "Return codes" on page 224.

IRMLOG

A processing log is written to DD IRMLOG. It contains the following information:

- Number of lists/reports to be archived (archive requests)
- Number of archive subpools
- Archive pool status (OK or ERRor)

```

+-----+
|IRM1561I PROGRAM: B97ARC   VERSION: V7R200  PTFVLVL: ptflvl  COMPILED: date,time
|IRM1800I ARCHIVE PROCESSING STARTED - DATE: 10.03.2020, TIME: 16:31:42
|IRM1801I *****
|IRM1801I 000000 ARCHIVE REQUEST(S) FOR POOL QI#C002 / QDOC   SUBPOOL(S) 002 STATUS OK
|IRM1801I 000000 ARCHIVE REQUEST(S) FOR POOL QI#C010 / QDOC   SUBPOOL(S) 002 STATUS OK
|IRM1801I 000000 ARCHIVE REQUEST(S) FOR POOL QI#D003 / QDOC   SUBPOOL(S) 002 STATUS OK
|IRM1801I 000004 ARCHIVE REQUEST(S) FOR POOL RJDSK10 / CUST001 SUBPOOL(S) 001 STATUS OK
|IRM1801I ...
|IRM1801I -----
|IRM1801I 16:31:43          ARCHIVE OPENED FOR POOL RJDSK10
|IRM1801I                   FILE(*) NEW CATALOG DEFER DSNAME(TRASH.REINH1.E20069.C003)
|IRM1801I                   EXPDT(2031/079) TRACKS RELEASE SPACE(00200)
|IRM1801I 16:31:43          ARCHIVE CLOSED FOR POOL RJDSK10
|IRM1801I *****
|IRM1899I ARCHIVE PROCESSING ENDED - DATE: 10.03.2020, TIME: 16:31:43, RC: 0000
+-----+
    
```

IRMPRINT

DD IRMPRINT itemizes the archive requests for each archive pool. The log contains the following:

- DATE / TIME: Creation date and time of the list/report
- FORM / EXTENSION / REPORT: Name of the list
- PAGES: Number of pages of the list/report
- STATUS: Status of this request (internal return code)
- RETPD / M / OWNER: archive retention period, medium, and owner
- The retention period, medium (D=disk, T=tape, O=optical disk, C=centera), and owner are output only if an error occurred.

```

+-----+
|Date: 10.03.2020 Product: Beta 97          ARCHIVE UTILITY          Page: 1
|Time: 16:31:42   Version: V7R2           POOL: RJDSK10
|
|Date      Time      Form      Extension      Report      Pages      Status      Retpd M Owner
|-----|-----|-----|-----|-----|-----|-----|-----|
|10.03.2020 14:09:46 REJ      BALDESCOMPTE5  00000005      00005 D CUST001
|10.03.2020 14:12:46 REJ      TRADE         00000015      00010 D CUST001
|10.03.2020 14:19:48 REJ      TRADE         00000015      00010 D CUST001
|10.03.2020 14:22:49 REJ      INVENTORY     00000009      00010 D CUST001
|
|Date: 10.03.2020 Product: Beta 97          ARCHIVE UTILITY          Page: 2
|Time: 16:31:42   Version: V7R2           POOL: NO MATCH
|
|Date      Time      Form      Extension      Report      Pages      Status      Retpd M Owner
|-----|-----|-----|-----|-----|-----|-----|-----|
|11.03.2020 16:45:35 REJ      TRADE         00000015 RC=2402  00365 C CUST001
+-----+
    
```

Return codes in Status column

Following is a list of return codes that may occur in the **Status** column.

If the return code displayed in your log is not in this list, check whether the Adabas Audit Data Retrieval started task was available during the entire run of the archive batch utility. If this was not the case, start the system and rerun the archive batch utility so that the remaining lists can be archived. For a list of codes, see "Database codes" in *BSA Messages and Codes*.

Return code	Description
1505	<p>Reason: The list has been assigned to an archive pool containing at least one subpool for archiving to optical disks, but there are no logical volumes available in the archive device table for the owner of the list.</p> <p>Result: The list is not archived. The archive status of the list remains Pend (Archive pending).</p> <p>Action: Add the required definitions using option A.4. For more information, see "Defining archive devices for optical disks" on page 162.</p>
2401	<p>Reason: The list has been assigned to the best matching archive pool based on the criteria archive medium, retention period, and owner, but this archive pool had to be set to 'error' because the archive pool definition is invalid with these archive subpool definitions.</p> <p>Result: The list is not archived. The archive status of the list remains Pend (Archive pending).</p> <p>Action: Correct the definition of the archive pool and/or subpools in question. The list will be archived at the next run of the archive batch utility.</p>
2402	<p>Reason: The list could not be assigned to any archive pool based on the criteria archive medium, retention period, and owner.</p> <p>Result: The list is not archived. The archive status of the list remains Pend (Archive pending).</p> <p>Action: Check the archive medium, retention period, and owner specified in the list definition and the archive pool definitions. Do one of the following:</p> <ul style="list-style-type: none"> • If the list definition is correct, change the archive pool definitions. The list will be archived at the next run of the archive batch utility. • If the list definition is incorrect, update the list definition to ensure that future generations of the list will be processed correctly. To update the archive information of an existing generation of the list, change the archive status of the list to No (line command UA) and then to Pend (line command A) (see "Manually marking lists for archiving" on page 56).

Return code	Description
2403	<p>Reason: A device could not be accessed during writing (DYNALLOC error).</p> <p>Result: The list is not archived. The archive status of the list remains Pend (Archive pending).</p> <p>Action: Check the system messages of the job to find out which device caused this error. The device to be used is specified in the Unit field in the archive subpool definition. After the device specified in the archive subpool definition has become available (again), you can rerun the archive batch utility to archive the lists concerned.</p>

B97AXPDT: Archive expiration date batch utility

Overview

The archive expiration date utility (B97AXPDT) must run for modifications to a list's archive expiration date to take effect. If the archive expiration date is to be extended, this modification can be done manually (line command **E** under option 1) or with the batch utility B97BUGEN (see page 248). If the archive expiration date is to be reduced, this modification can only be done with the batch utility B97BUGEN.

Which archive datasets are affected

If the archive expiration date is to be extended

B97AXPDT changes the generation records and the archive datasets of the affected lists.

Modifying the archive expiration date of a list affects not only the archive dataset containing the list, but an entire group of archive datasets generated during the corresponding archive run.

- By default, the program modifies all archive datasets that were generated for the corresponding archive pool.
- If you specify the parameter `ORDER = nn`, the program modifies all archive datasets that were generated for the corresponding archive subpool.

If the archive expiration date is to be reduced

B97AXPDT only changes the generation records of the affected lists. The archive datasets of the affected lists will not be changed.

Important: Updating TMS/SMS/HSM when increasing the archive retention period

The batch utility B97AXPDT only carries out the changes that are required in the Adabas Audit Data Retrieval database. In addition, you must ensure that these changes take effect in the corresponding management system (TMS, SMS, HSM). Therefore you must check (and if necessary change) the expiration date of these datasets and volumes in the corresponding management system. The batch utility B97AXPDT prints a list of the affected datasets and volumes in DD IRMPRINT.

JCL

```

+-----+
|jobcard
|//B97AXPDT EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97AXPDT',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//B97DEF DD DUMMY
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//SYSPRINT DD DUMMY
|//IRMPRINT DD SYSOUT=*
|//IRMLLOG DD SYSOUT=*
|//IRMERROR DD SYSOUT=*
|//SYSIN DD *
|parameters
|/*
+-----+

```

Return codes

- 0** The program terminated normally.
- 4** The program did not find any data to be modified; the program terminated normally.
- Note:** In analyze mode, RC=4 can also mean the following:
- The program has found data to be modified. But if the program was running in normal mode and tried to carry out these changes, they would lead to an error. You can find more information in the job log.
- >4** One or several errors occurred during processing. Please check the job log for details.

Some return codes are program-specific. Others are standard return codes which can also be modified. More information on standard return codes can be found in "Return codes" on page 224.

SYSIN parameters

All SYSIN parameters are optional.

Parameter	Description
ANALYZE = YES NO	<p>NO The program modifies the archive expiration date and logs the actions that it carries out. (Default)</p> <p>YES The program runs in analyze mode; it writes the reports, but it does not actually change any data.</p>
DATEMASK = <i>mask</i>	Date format to be used in reports (Default: Date mask of system options record)
ORDER = <i>nn</i>	<p>The program modifies only the archive datasets having the specified value in the Order for Reload field.</p> <p>You can specify ORDER = <i>nn</i> up to five times. If you don't specify this parameter, the expiration dates of all archive datasets of the archive pool are modified.</p>

IRMPRINT

The following log is written to DD IRMPRINT. It contains a list of all lists/reports whose archive retention period was changed.

```

-----
|Date: date      Product: Beta 97                ARCHIVE EXPIRATION UTILITY                Page: 1
|Time: time     Version: V7R2
-----
|Date      Time      Form  Extension  Report  Old_ArcExpdt  New_ArcExpdt  Request  Pool  Owner  Archive Pointer
-----
|10.07.2018 14:12:46:99 REJ   TRADE                20.12.2025   05.08.2040   EXTEND   DISK10  CUST001  D47BA607FE12250A00000...
|10.07.2018 14:12:55:14 REJ   TRADE                15.11.2023   05.08.2040   EXTEND   TAPE02  CUST001  D47BA607FE12250A00000...
|17.07.2018 09:54:31:18 REJ   TRADE01             15.06.2054   31.12.2013   REDUCE   DISK02  CUST001  D476CC31C643B60800000...
-----
    
```

If the archive retention period is to be extended, the protocoll contains a second part. This part contains a list of datasets and media, whose retention period you must change, for example in the Tape Management System, after the archive retention period was changed in the Adabas Audit Data Retrieval database.

```

-----
|Date: date      Product: Beta 97                ARCHIVE EXPIRATION UTILITY                Page: 1
|Time: time     Version: V7R2                ARCHIVE MEDIA/DATASETS
-----
|=====
|The expiration date for the following datasets or media must be
|updated in the corresponding management system:
|=====
|
|Medium Volume Archive Dataset Name                New Expdt
|-----
|DISK  BETA97.SYS1.DISK.E09069.C001                05.08.2040
|DISK  BETA97.SYS1.DISK.E09069.C002                05.08.2040
|TAPE  BETA97.SYS1.DISK.E09069.C003                05.08.2040
|
-----
    
```

IRMLOG

A processing log is written to DD IRMLOG. It contains the SYSIN parameters and an overview of the records processed.

```

-----
|IRM1561I PROGRAM: B97AXPDT  VERSION: V7R2M00  PTFVLV: ptfLvl  COMPILED: date, time
|IRM1800I AEXPDT  PROCESSING STARTED - DATE: 10.07.2018, TIME: 16:42:52
|IRM2210I *****
|IRM1901D ANALYZE NO
|IRM2210I -----
|IRM2201I Processed dataset(s) ...
|IRM2201I BETA97.SYS1.DISK.E09069.C001          05.08.2040 DISK
|IRM2201I BETA97.SYS1.DISK.E09069.C002          05.08.2040 DISK
|IRM2201I BETA97.SYS1.TAPE.E09069.C003         05.08.2040 TAPE
|IRM2201I -----
|IRM2210I IGR(S) READ                          : 000001
|IRM2210I IGR(S) UPDATED                       : 000001
|IRM2210I AGR(S) UPDATED                       : 000003
|IRM2210I REQUEST(S) FAILED/IN ERROR          : 000000
|IRM2210I *****
|IRM1899I AEXPDT  PROCESSING ENDED   - DATE: 10.07.2018, TIME: 16:42:52, RC: 0000
-----

```

B97BRLD: Reload request batch utility

Overview

The batch utility B97BRLD generates requests for reloading data from the archive. A reload request refers to the list and all its indexes.

The selection criteria and processing parameters are specified in DD SYSIN.

Reloading

The actual reloading of the data from the archive is carried out by the batch utility B97RLD, which executes the reload requests that are present in the reload queue (see "B97RLD: Reload batch utility" on page 305).

JCL

You can find sample JCL for this batch utility in the BETA97.CNTL in member B97BRLD.

```

+-----+
|jobcard
|//B97BRLD EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97BRLD',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//B97DEF DD DUMMY
|//SFFPARAM DD DISP=SHR,DSN=BETA.PARMLIB
|//*
|//SYSPRINT DD SYSOUT=*
|//IRMLOG DD SYSOUT=*
|//IRMPRINT DD SYSOUT=*
|//*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//*
|//SYSIN DD *
|parameters
|/*
+-----+

```

Return codes	0	The program terminated normally.
	4	This return code can occur due to several reasons: <ul style="list-style-type: none"> • No data found (*) • A warning was issued
	12	Component error
	16	Out of memory
	20	This return code can occur due to several reasons: <ul style="list-style-type: none"> • DD statement missing (*) • Error when opening a log file (*) • Error when initializing the database access (*) • Database access error (*) • Syntax error
	24	Communication error
	32	BQLabend
	36	BQL command error

Note: (*) indicates standard return codes that can be modified (see "Return codes" on page 224).

Syntax DD SYSIN

DD SYSIN contains:

- One or more selection blocks that are introduced by the following line:

```
RELOAD = GENERATION
```

This line is followed by the statements that control the selection of lists/reports and the desired parameters for the corresponding reload requests.

Each statement is coded on a separate line and is structured as follows:

```
keyword = value
```

The equal sign (=) is optional in all statements. To mark a line as comment line, enter an asterisk (*) in the first column of the line. If a value is empty (for example, EXTENSION), enter a blank enclosed in single quotation marks:

```
EXTENSION = ' '
```

Keywords for processing The following keywords can be coded only once and apply to the entire processing. The position of these keywords in DD SYSIN is arbitrary.

Keyword	Parameter	Description	Option	Mask	Default	Length
FULLLISTINFO	YES NO	Amount of information output	optional	no	NO	3
LINESPERPAGE	0-999	Max. error limit	optional	no	value from option S.2	3
ANALYZE	YES NO	Analyze mode	optional	no	NO	3
DATEMASK	date mask	Date format for date specification	optional	no	System date mask (S.2)	10

FULLLISTINFO controls the amount of information output for each list; only the most important information from the generation record is output for each list in case the keyword is not coded.

LINESPERPAGE determines the page length (number of lines) of the log.

ANALYZE = YES switches the analyze mode on (simulation). Logs are created, but no data is changed in analyze mode.

Specify DATEMASK=*datemask* if your date specifications (SDATE/EDATE) are in a different format from the system date mask (option **S.2**).

Keywords for selection A selection block begins with the instruction RELOAD GENERATION (required), which is followed by the desired selection criteria.

Keyword	Parameter	Description	Option	Mask	Default	Length
RELOAD	GENERATION		required	no		10
PROCESS	ALL REPORT LIST	Process lists, reports or both	optional	no	ALL	6
FORM	<i>name</i>	Form name	optional	yes	*	8
EXTENSION	<i>name</i>	Extension name	optional	yes	*	16
REPORT	<i>name</i>	Report name	optional	yes	*	16
FOLDER	<i>name</i>	Folder name	optional	yes	*	32
TITLE	<i>string</i>	String in title	optional	no	*	16
FTITLE	<i>n</i>	From column	optional	no	0	2
SDATE	The date must be coded in accordance with DATEMASK (default: system date mask from option S.2)	Start date	required	no		10
EDATE	See SDATE	End date	optional	no	TODAY	10
STIME	hh:mm:ss	Start time	optional	no	00:00:00	8
ETIME	hh:mm:ss	End time	optional	no	23:59:59	8
JOBNAME	<i>name</i>	Jobname	optional	yes		8

Example

```
//SYSIN DD *
RELOAD GENERATION
FORM REJ
SDATE 10.03.2020
EDATE 11.03.2020
```

IRMPRINT The following log is written to DD IRMPRINT. It displays all lists and reports that were requested for reload.

```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|Date: 18.03.2020 Product: Beta 97                                BATCH RELOAD UTILITY                                Page: 1|
|Time: 10:53:56  Version: V7R2                                                                            |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|Date      Time      Jobname Onl Arc Afp Nci >32k Form  Extension  Report      Pages|
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|11.03.2020 16:28:34 - B93TEST NO YES NO NO NO REJ  TRADE      15|
|10.03.2020 14:22:49 - B93TEST NO YES NO NO NO REJ  INVENTORY   9|
|10.03.2020 14:19:48 - B93TEST NO YES NO NO NO REJ  TRADE      15|
|10.03.2020 14:12:46 - B93TEST NO YES NO NO NO REJ  TRADE      15|
+-----+-----+-----+-----+-----+-----+-----+-----+-----+

```

IRMLOG

A processing log is written to DD IRMLOG. It contains a list of the messages describing all processes of the program, including any errors which might have occurred.

```

+-----+
|IRM1561I PROGRAM: B97BRLD  VERSION: V7R2M00  PTFVLV: ptfLvl  COMPILED: date, time
|IRM2840I B97BRLD  BATCH RELOAD UTILITY STARTED - DATE: 18.03.2020, TIME: 10:53:55
|IRM2210I Date mask DD.MM.YYYY used from system record
|IRM2210I *****
|IRM1901D RELOAD GENERATION
|IRM1901D FORM      REJ
|IRM1901D SDATE    10.03.2020
|IRM1901D EDATE    11.03.2020
|IRM2210I -----
|IRM2210I SELECTION STARTED
|IRM2210I SELECTION ENDED
|IRM2842I 000000004 RELOAD REQUEST(S) QUEUED
|IRM2210I -----
|IRM2210I SUMMARY:
|IRM2842I 000000004 RELOAD REQUEST(S) QUEUED
|IRM2843I 000000004 RELOAD REQUEST(S) QUEUED FOR LISTS
|IRM2210I *****
|IRM2841I B97BRLD  BATCH RELOAD UTILITY ENDED  - DATE: 18.03.2020, TIME: 10:53:56, RC: 0000
+-----+

```

B97BSTAT: Generation select batch utility

Overview

The generation select utility B97BSTAT enables you to output information on selected generations of lists/reports.

You can also specify queries which will be executed for the list generations selected, in order to determine the number of hit pages and hit lines for this list and output them in a log.

Note on offline indexes

If the program B97BSTAT requires offline indexes to carry out a query, these indexes will be automatically reloaded to the index spool.

If you want to prevent the reloading of offline indexes, specify the parameter OBJ_RETRIEVAL_DEVICES=0 in the EXEC statement.

JCL

Tailored JCL for this batch utility can be found in member B97BSTAT in the BETA97.CNTL

```

+-----+
|jobcard
|//B97BSTAT EXEC PGM=BST01RFF,REGION=0M,PARM=( 'S=97',
|//          'PGM=B97BSTAT',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//B97DEF DD DUMMY
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//*
|//SYSPRINT DD SYSOUT=*
|//IRMLLOG DD SYSOUT=*
|//IRMPRINT DD SYSOUT=*
|//*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//*
|//SYSIN DD *
|parameters
|//*
+-----+

```

Return codes	0	The program terminated normally.
	4	This return code can occur due to several reasons: <ul style="list-style-type: none"> • No data found for at least one selection • A warning was issued
	12	Component error
	16	Out of memory
	20	This return code can occur due to several reasons: <ul style="list-style-type: none"> • DD statement missing (*) • Error when opening a log file (*) • Error when initializing the database access (*) • Database access error (*) • Syntax error
	24	Communication error
	32	BQLabend
	36	BQL command error

Note: (*) indicates standard return codes that can be modified (see "Return codes" on page 224).

Syntax DD SYSIN

DD SYSIN contains:

- One statement block specifying the sort order (SORTORDER), the amount of information to be printed (FULLLISTINFO) in the log and its page length (LINESPERPAGE); these specifications apply to the entire program run.
- One or more selection blocks that are introduced by the following line:

```
SELECT = GENERATION
```

This line is followed by the statements that control the selection of lists/reports.

Each statement is coded on a separate line and is structured as follows:

keyword = value

The equal sign (=) is optional in all statements. To mark a line as comment line, enter an asterisk (*) in the first column of the line. If a value is blank (for example, EXTENSION), enter a blank enclosed in single quotation marks:

```
EXTENSION = ' '
```

Keywords for processing

Keyword	Parameter	Description	Option	Mask	Default	Length
SORTORDER	(<i>val,sort,va,sort</i>) Replace <i>val</i> with: TIME JOBNAME JOBID FORM EXTENSION REPORT TITLE Replace <i>sort</i> with A D	Sort order for output Read-in date and time Jobname Job ID Form name Extension name Report name Title Ascending Descending	Optional	No		
FULLLISTINFO		Controls the amount of information	Optional	No		
LINESPERPAGE	<i>nn</i>	Page length (number of lines) of the log	Optional	No	Value from option S.2	2
DATEMASK	date mask	Date format for date specification	Optional	No	System date mask (S.2)	10

FULLLISTINFO controls the amount of information logged for each list in DD IRMPRINT; if you do not code this keyword, only the most important information from the generation record is logged for each list.

Specify DATEMASK=*datemask* if your date specifications (SDATE/EDATE) are in a different format from the system date mask (option **S.2**).

Keywords for selection

A selection block begins with the instruction SELECT GENERATION (required), which is followed by the desired selection criteria. Instead of a date, you can also use the keywords TODAY, YESTERDAY, and MONDAY through SUNDAY.

Keyword	Format/Length	Description	Default	Required	Masks
SELECT	GENERATION			Yes	No
FORM	8 characters			Yes	Yes
EXTENSION	16 characters		*	No	Yes
FOLDER	32 characters		*	No	Yes

Keyword	Format/Length	Description	Default	Required	Masks
TITLE	16 characters		*	No	No
FTITLE	0-60	Start column in title	0	No	No
SDATE	The date must be coded in accordance with DATEMASK (default: system date mask from option S.2)	Start date		Yes	No
EDATE	See SDATE	End date	TODAY	No	No
STIME	hh:mm:ss	Start time	00:00:00	No	No
ETIME	hh:mm:ss	End time	23:59:59	No	No
JOBNAME	8 characters	Jobname		No	Yes
DISPLAY	ALL LIST REPORT	Select lists, reports or both	ALL	No	No
ONLINE	YES NO	Online status	(blank)	No	No
ARCHIVE	YES NO PEND	Archive status	(blank)	No	No
DELETE	YES NO	(Not) marked for deletion	(blank)	No	No
RELOAD	YES NO	(Not) marked for reloading	(blank)	No	No
VIEWABLE	YES NO ALL	(Not) marked as viewable	YES	No	No
NOTES	YES NO	With/without browser notes	(blank)	No	No
SELIDX	<i>indexname</i>	Index as selection criterion (you can use this keyword up to 5 times)	(blank)	No	Yes
INDEX	(<i>indexname1 = value1, indexname2 = value2, ... indexnamen = valuen</i>)	Index query AND connection if index names and values are in the same INDEX statement; OR-connection if index names and values are in separate statements		No	Yes

Example

```
//SYSIN DD *
FULLLISTINFO
LINESPERPAGE 55
SORTORDER (FORM,A,EXTENSION,A)
SELECT GENERATION
  FORM      = REJ
  EXTENSION = BALDESCOMPTE
  SDATE     = 04.08.2020
  SELIDX    = LOCATION
  INDEX     = (LOCATION = BORDEAUX)
/*
```

IRMPRINT

DD IRMPRINT contains the following information for each list selected:

- Read-in date and time
- Name of creating job
- Online status
- Archive status
- Form and extension
- Etoken and number of index blocks
- Number of hit pages and hit lines

Date	Time	Jobname	Onl	Arc	ItmP	ItmD	Form	Extension	Report	Etoken	Indexblocks	

04.08.2020	12:22:05	- REJ\$IMP	YES	NO	NO	NO	REJ	BALDESCOMPTE		D851C96629CD2611	00000003	

Index Selection (first 80 bytes of INDEX statement(s))										PageHits	ItemHits	LineHits

INDEX = (LOCATION = BORDEAUX)										17	not av.	17

Date	Time	Jobname	Onl	Arc	ItmP	ItmD	Form	Extension	Report	Etoken	Indexblocks	

04.08.2020	12:35:07	- REJ\$IMP	YES	NO	NO	NO	REJ	BALDESCOMPTE		D851CC4F80D1F011	00000003	

Index Selection (first 80 bytes of INDEX statement(s))										PageHits	ItemHits	LineHits

INDEX = (LOCATION = BORDEAUX)										17	not av.	17

If the keyword FULLLISTINFO is coded, additional information from the list generation record is printed for each list:

Date	Time	Jobname	Onl	Arc	ItmP	ItmD	Form	Extension	Report	Etoken	Indexblocks	
04.08.2020	12:22:05	REJ\$IMP	YES	NO	NO	NO	REJ	BALDESCOMPTE		D851C96629CD2611	00000003	
Title ----- BALANCE DES COMPTE												
Job-ID Stepname Procstep DD-Name Pages >32k Afp Trc Xerox Ascii Nci ----- *IMPORT* IMPORT IMPORT SYS00129 65 NO NO NO NO NO NO												
Mview Mdel Marc Notes Layout Spoolpointer in HEX ----- YES NO 0013FFFF00021B00000000100000041												
Index Selection (first 80 bytes of INDEX statement(s))										PageHits	ItemHits	LineHits
INDEX = (LOCATION = BORDEAUX)										17	not av.	17
Date	Time	Jobname	Onl	Arc	ItmP	ItmD	Form	Extension	Report	Etoken	Indexblocks	
04.08.2020	12:35:07	REJ\$IMP	YES	NO	NO	NO	REJ	BALDESCOMPTE		D851CC4F80D1F011	00000003	
Title ----- BALANCE DES COMPTE												
Job-ID Stepname Procstep DD-Name Pages >32k Afp Trc Xerox Ascii Nci ----- *IMPORT* IMPORT IMPORT SYS00164 65 NO NO NO NO NO NO												
Mview Mdel Marc Notes Layout Spoolpointer in HEX ----- YES NO 0013FFFF00022700000000100000041												
Index Selection (first 80 bytes of INDEX statement(s))										PageHits	ItemHits	LineHits
INDEX = (LOCATION = BORDEAUX)										17	not av.	17

IRMLOG

A processing log is written to DD IRMLOG.

```

-----
|11.08.2020 09:17:31 IRM1561I PROGRAM: B97BSTAT VERSION: V7R2M00 PTFLVL: ptflvl COMPILED: date, time
|11.08.2020 09:17:31 IRM2200I B97BSTAT BATCH SELECT UTILITY STARTED - DATE: 11.08.2020, TIME: 09:17:31
|11.08.2020 09:17:31 IRM2210I Date mask DD.MM.YYYY used from system record
|11.08.2020 09:17:31 IRM2210I *****
|11.08.2020 09:17:31 IRM1901D DATEMASK = YYYY-MM-DD
|11.08.2020 09:17:31 IRM2010I Date mask YYYY-MM-DD entered via SYSIN used for data processing
|11.08.2020 09:17:31 IRM1901D SELECT GENERATION
|11.08.2020 09:17:31 IRM1901D SDATE = 2020-08-04
|11.08.2020 09:17:31 IRM1901D EDATE = 2020-08-04
|11.08.2020 09:17:31 IRM1901D FORM = REJ
|11.08.2020 09:17:31 IRM1901D EXTENSION = BALDESCOMPTES
|11.08.2020 09:17:31 IRM1901D SELIDX = LOCATION
|11.08.2020 09:17:31 IRM1901D INDEX = (LOCATION = BORDEAUX)
|11.08.2020 09:17:31 IRM2210I -----
|11.08.2020 09:17:31 IRM2210I SELECTION STARTED
|11.08.2020 09:17:31 IRM2203I 09:17:31 SORT STARTED
|11.08.2020 09:17:31 IRM2210I SELECTION ENDED
|11.08.2020 09:17:31 IRM2204I 09:17:31 PRINT STARTED
|11.08.2020 09:17:31 IRM2201I 000000002 LIST(S) SELECTED
|11.08.2020 09:17:31 IRM2202I 000000000 REPORT(S) SELECTED
|11.08.2020 09:17:31 IRM2210I *****
|11.08.2020 09:17:31 IRM2299I B97BSTAT BATCH SELECT UTILITY ENDED - DATE: 11.08.2020, TIME: 09:17:31, RC: 0000
-----

```

B97BUGEN: Generation update batch utility

Overview

Adabas Audit Data Retrieval creates a list generation record (IGR) each time a list/report is read in. With the help of the batch utility B97BUGEN you can retrospectively change certain fields in the generation records of selected lists/reports.

Possible changes

The following specifications can be changed:

- To mark as not-viewable/viewable (analogous to line commands **NV/V** in the "List/Report Selection Table")
- To mark for delete or undelete (analogous to line commands **D/UD** in the "List/Report Selection Table")
Requirement: The list/report is available online.
- Item display mode
Requirement: The list has been read in and processed in item mode.
- User-defined query mask (layout) that is to be used for this list
- To mark for archive or unarchive (analogous to line commands **A/UA** in the "List/Report Selection Table")
- Archive expiration date

The archive retention period can be extended or reduced.

Requirement: The list and its indexes have already been archived.

Modifications of the archive expiration date cannot be executed together with other changes in the same B97BUGEN job. For example, if you want to mark lists as not-viewable and reduce their archive retention period, use separate B97BUGEN jobs.

Important: Specifying a new archive expiration date just marks the list for a change of archive expiration date. The batch utility B97AXPDT must run for modifications to a list's archive expiration date to take effect (see page 232).

JCL

You can find sample JCL for this batch utility in the BETA97.CNTL in member B97BUGEN.

```
+-----+
|jobcard
|//B97BUGEN EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97BUGEN',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//B97DEF DD DUMMY
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//*
|//SYSPRINT DD SYSOUT=*
|//IRMLLOG DD SYSOUT=*
|//IRMPRINT DD SYSOUT=*
|//*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//*
|//SYSIN DD *
|parameters
|/*
+-----+
```

Return codes

- 0** The program terminated normally.
- 4** This return code can occur due to several reasons:
- No data found for at least one selection
 - No change for at least one selection
- 8** This return code can occur due to several reasons:
- Specified errorlimit has been reached (*)
 - Attributes relevant to archiving are missing (only if ARCHIVE=YES)
- 12** Component error
- 16** This return code can occur due to several reasons:
- Out of memory
 - Authorization failed (RACF)
- 20** This return code can occur due to several reasons:
- DD statement missing (*)
 - Error when opening a log file (*)
 - Error when initializing the database access (*)
 - Database access error (*)
 - Syntax error
- 24** Communication error
- 32** BQLabend
- 36** BQL command error

Note: (*) indicates standard return codes that can be modified (see "Return codes" on page 224).

Syntax DD SYSIN

DD SYSIN contains:

- Optionally, the ERRORLIMIT parameter (applies to all selection blocks)
- One or more selection blocks that are introduced by the following line:

```
UPDATE = GENERATION
```

This line is followed by the statements that control the selection of lists/reports and the statements that control the change of status for the selected lists/reports.

Each statement is coded on a separate line and is structured as follows:

```
keyword = value
```

The equal sign (=) is optional in all statements. To mark a line as comment line, enter an asterisk (*) in the first column of the line. If a value is blank (for example, extension), enter a blank enclosed in single quotation marks:

```
EXTENSION = ' '
```

Keywords for processing

The following keywords can be coded only once and apply to the entire processing. The keywords can be placed anywhere within DD SYSIN.

Keyword	Parameter	Description	Option	Mask	Default	Length
ERRORLIMIT	0-999	Max. error limit	optional	no	1	3
ANALYZE	YES NO	Analyze mode	optional	no	NO	3
DATEMASK	date mask	Date format for date specification	optional	no	System date mask (S.2)	10
REDUCE_ AEXPDT	MARK UNMARK	Marks the lists/reports for reducing the archive retention period or removes the flag.	See note below the table	no		6

0 (no limit) through **999** can be coded for ERRORLIMIT. The number specifies the number of error messages issued, after which processing is interrupted or terminated. The default is **1**, which means that the first error causes processing to be interrupted.

ANALYZE = YES causes the program to run in analyze mode (simulation). This means that only logs are created, but no data is modified.

Specify DATEMASK=*datemask* if your date specifications (SDATE/EDATE) are in a different format from the system date mask (option **S.2**).

Specify REDUCE_AEXPDT if the archive retention period is to be reduced.

Keywords for selection

A selection block begins with the instruction UPDATE GENERATION (required), which is followed by the desired selection criteria. For all date entries, you can also enter the words TODAY, YESTERDAY, and MONDAY through SUNDAY instead of a date.

Keyword	Parameter	Description	Option	Mask	Default	Length
UPDATE	GENERATION		required	no		10
FORM	name	Form name	optional	yes	*	8
EXTENSION	name	Extension name	optional	yes	*	16
REPORT	name	Report name	optional	yes	*	16
PROCESS	ALL REPORT LIST	Process lists, reports or both	required	no		6
SDATE	The date must be coded in accordance with DATEMASK (default: system date mask from option S.2)	Start date	required	no		10
EDATE	See SDATE	End date	optional	no	<i>start date</i>	10
STIME	hh:mm:ss	Start time	optional	no	00:00:00	8
ETIME	hh:mm:ss	End time	optional	no	23:59:59	8
JOBNAME	name	Jobname	optional	yes		8
DOCTYPE	<i>string</i>	Mime type (File extension for ASCII documents)	optional	no		8
SUBMITD	The date must be coded in accordance with the datemask in the system record	Submit date	optional	no		10
SUBMITT	hh:mm:ss:xx	Submit time	optional	no		11
OLDRETPD	1..36500	Current archive retention period	optional	no		5
-or-						
OLDEXPDT	The date must be coded in accordance with DATEMASK (default: system date mask from option S.2)	Current archive expiration date				10

Keywords for change of status The keywords for the change of status are coded following UPDATE GENERATION and only apply to the corresponding selection block.

Keyword	Parameter	Description	Option
VIEWABLE	YES NO	Marks the list/report as not-viewable or removes this flag	optional
DELETE	YES NO	Marks the list/report for deletion or removes this flag	optional
ARCHIVE	YES NO	Marks the list/report for archiving or removes this flag Please note the section "If ARCHIVE=YES leads to RC=8" below the table.	optional
ITEMDISP	YES NO	Changes the value in the Item Display Mode field of the generation record	optional
LAYOUT	max. 16 character name or <i>blank</i>	Enters the name of the layout in the generation record in order to use the corresponding user-defined query mask (or deletes the name if <i>blank</i>) for this list	optional
NEWEXPDT -or- ADDRETPD -or- SUBRETPD	Date (date mask as specified in the system options) max. 5 digits max. 5 digits	Enters a new archive expiration date in the generation record To make this change effective, the batch utility B97AXPDT must run. Specification of a number of days to be added to the current archive expiration date To make this change effective, the batch utility B97AXPDT must run. Specification of a number of days to be deducted from the current archive expiration date To make this change effective, the batch utility B97AXPDT must run.	optional

If SUBRETPD or NEWEXPDT are used to enter an archive expiration date in the IGR that is less than or equal to the current date (archive retention period is to be reduced), you have to specify REDUCE_AEXPDT.

If ARCHIVE=YES leads to RC=8

ARCHIVE=YES leads to RC=8 if archive information is incomplete. Check whether all required attributes that are relevant to archiving have been set for the list/report, i.e. archive retention period, archive medium, and owner. You can use the keywords ARCRETPD, ARCHMED and OWNER in combination with ARCHIVE=YES to set missing attributes.

Keyword	Parameter	Description	Option
ARCRETPD	max. 5 digit value	Defines the archive retention period	optional
ARCHMED	TAPE DISK ODISK CTERA	Defines the archive medium	optional
OWNER	max. 8 character name or <i>blank</i>	In order to be assigned to an archive pool, the owner of the list and the owner of the pool definition must be identical.	optional

Example

```
//SYSIN DD *
ERRORLIMIT = 0
*
UPDATE GENERATION
PROCESS = LIST
DELETE = YES
SDATE = 10.03.2009
FORM = REJ
EXTENSION = INVENTORY
*
UPDATE GENERATION
PROCESS = ALL
VIEWABLE = NO
SDATE = 10.03.2009
FORM = REJ
EXTENSION = TRADE
/*
```

IRMPRINT

The following log is written to DD IRMPRINT. It contains a list of all lists/reports that were selected for a change of status.

```

+-----+
|Date: 10.07.2020 Product: Beta 97                                BATCH UPDATE UTILITY                                Page: 1|
|Time: 14:26:37  Version: V7R2                                                                            |
+-----+
|Date      Time      Form      Extension      Report      Jobname  Jesid      Submit Date / Time|
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|10.07.2020 14:19:48 - REJ      TRADE      Archive ArcMedium ArcRetpd Owner  Delete  Viewable ItemDisp Layout      NewExpdt|
|=====|
|Old - NO      YES      REJ-TRADE|
|New - NO      NO      REJ-TRADE|
|10.07.2020 14:12:46 - REJ      TRADE      Archive ArcMedium ArcRetpd Owner  Delete  Viewable ItemDisp Layout      NewExpdt|
|=====|
|Old - NO      YES      REJ-TRADE|
|New - NO      NO      REJ-TRADE|
|...|
|10.07.2020 14:22:49 - REJ      INVENTORY  Archive ArcMedium ArcRetpd Owner  Delete  Viewable ItemDisp Layout      NewExpdt|
|=====|
|Old - NO      YES|
|New - NO      PENDING YES|
+-----+
    
```

IRMLOG

A processing log is written to DD IRMLOG.

```

+-----+
|IRM1561I PROGRAM: B97BUGEN VERSION: V7R2M00 PTFVLVL: ptflvl  COMPILED: date, time|
|IRM2200I B97BUGEN BATCH UPDATE UTILITY STARTED - DATE: 10.07.2020, TIME: 14:26:37|
|IRM2210I Date mask DD.MM.YYYY used from system record|
|IRM2210I *****|
|IRM1901D ERRORLIMIT = 0|
|IRM1901D UPDATE GENERATION|
|IRM1901D PROCESS = LIST|
|IRM1901D DELETE = YES|
|IRM1901D SDATE = 10.07.2020|
|IRM1901D FORM = REJ|
|IRM1901D EXTENSION = INVENTORY|
|IRM1901D UPDATE GENERATION|
|IRM1901D PROCESS = ALL|
|IRM1901D VIEWABLE = NO|
|IRM1901D SDATE = 10.07.2020|
|IRM1901D FORM = REJ|
|IRM1901D EXTENSION = TRADE|
|IRM2210I -----|
|IRM2201I 000000003 LIST(S) PROCESSED|
|IRM2202I 000000000 REPORT(S) PROCESSED|
|IRM2210I *****|
|IRM2299I B97BUGEN BATCH UPDATE UTILITY ENDED - DATE: 10.07.2020, TIME: 14:26:37, RC: 0000|
+-----+
    
```

B97BUTLT: Upload batch utility

Overview

B97BUTLT reads data from a sequential dataset and inserts, updates, or deletes appropriate records in the Adabas Audit Data Retrieval database. You can find a tailored JCL for this utility in the BETA97.CNTL in member B97BUTLT.

SYSIN

Use DD SYSIN to specify which data should be inserted, updated, or deleted. The record format of the DD SYSIN dataset must be fixed.

Downloading and uploading data

The corresponding download utility is B97DLOAD (see page 290). For example, you can download definitions from a Adabas Audit Data Retrieval database by using B97DLOAD and then upload this data into another Adabas Audit Data Retrieval database using B97BUTLT. To do this, specify the output dataset created by B97DLOAD (DD IRMPRINT) as input dataset of B97BUTLT (DD SYSIN).

SMF records

Changes in the Adabas Audit Data Retrieval database are logged in SMF records of subtype 51 if the writing of these records has been activated.

Syntax for insert

A BUTLT statement that inserts a new record consists of the command **INSERT TABLE *tablename***, which is followed by the name-value pairs for the fields of the record:

```
INSERT TABLE tablename
  field_1 = "value"
  field_2 = "value"
  field_n = "value"
```

Each name-value pair (*fieldname* = "value") must be on a separate line. The INSERT keyword is optional and may be omitted.

```
TABLE tablename
  field_1 = "value"
  field_2 = "value"
  field_n = "value"
```

Syntax for delete

A BUTLT statement that deletes one or more records consists of the command **DELETE TABLE *tablename***, which is followed by a WHERE condition:

```
DELETE TABLE tablename
WHERE
  field_a operator "value" [AND|OR field_b operator "value" ...]
```

The WHERE condition contains one expression (*fieldname* operator "value") or several AND/OR connected expressions, which control the selection of the records that are to be deleted.

Syntax for update

A BUTLT statement that updates one or more records consists of the command **UPDATE TABLE *tablename***, which is followed by one or several name-value pairs and a WHERE condition:

```
UPDATE TABLE tablename
  field_1 = "value"
  field_2 = "value"
  field_n = "value"
WHERE
  field_a operator "value" [AND|OR field_b operator "value" ...]
```

Each name-value pair (*fieldname* = "value") must be on a separate line.

The WHERE condition contains one expression (*fieldname* operator "value") or several AND/OR connected expressions, which control the selection of the records that are to be updated.

General syntax rules

The following rules apply to all BUTLT statements (INSERT, UPDATE, and DELETE):

- A BUTLT statement can contain the following elements:
 - The INSERT, TABLE, DELETE, UPDATE or WHERE keywords
 - Name-value pairs (*fieldname* = "value")
 - One or more expressions (*fieldname* operator "value") for the WHERE condition
- Keywords, operators, table names and field names must be written in upper case.
- Keywords, operators, table names and field names must be separated by one or more blanks.
- The keywords INSERT, DELETE, UPDATE and WHERE must begin in column 1. If INSERT is omitted, then TABLE must begin in column 1.

The following applies to name-value pairs:

- Each name-value pair (*fieldname* = "value") must be on a separate line and must begin in column 2 or higher.
- The equal sign (=) is optional and may be omitted.
- Values must be enclosed in quotation marks ("value").
- If a value extends beyond the end of the line, place closing quotation marks (") followed by a blank and a continuation sign (-) at the end of the first line and place beginning quotation marks (") in column 2 or higher of the next line.

The following applies to WHERE conditions:

- A WHERE condition consists of the WHERE keyword on a separate line, which is followed by one or more AND/OR connected expressions (*fieldname operator "value"*).
- Expressions must begin in column 2 or higher.
- Values must be enclosed in quotation marks ("*value*").
- Field name, operator and value must be on the same line.
- Do **not** code a continuation sign.

Example

```
+-----+
|UPDATE TABLE LDR
|  LTITLE = "THIS IS THE " -
|  "NEW TITLE OF MY LIST"
|WHERE
|  FORM EQ "REJ" AND
|  EXT EQ "TRADE"
+-----+
```

Important

The values of BYTE and FLAG fields must be specified using the external format. The corresponding language-dependent values must be specified in English.

Use the database dictionary (Option **D.2**) to find out about legal values.

Operators for the WHERE condition

Operator	Function
EQ or = or ==	equal
LIKE	like (interprets % and * as wildcards)
NE or ^=	not equal to
UNLIKE	unlike (interprets % and * as wildcards)
GT or >	greater than
GE or >=	greater than or equal to
LT or <	less than
LE or <=	less than or equal to
AND	Boolean AND
OR	Boolean OR
IN	May be used as abbreviated form for OR connection if the field name is identical This statement: <i>field</i> IN (<i>value1,value2</i>) is equivalent to: <i>field</i> EQ <i>value1</i> OR <i>field</i> EQ <i>value2</i>

Note on SASOVLN and IDXOVLN

Following are the corresponding values for the **Line No.** field, which is used in index definitions (IDXOVLN) and search argument definitions (SASOVLN):

This value ...	Corresponds to ...
0	MERGE
<i>n</i>	line number <i>n</i>
32768	ANY
65535	LAST

CONTROL statement

You can use CONTROL statements in DD SYSIN to control the program behavior of B97BUTLT, for example:

- Logging of BUTLT statements in DD IRMLOG
- Processing of the CDATE, CTIME and CUSER fields when inserting new records
- Program behavior if the insertion of a new record fails because of RC=142 (Duplicate key)

Normally, the CONTROL statement is placed at the beginning of DD SYSIN.

Syntax of the CONTROL statement

CONTROL statements must use the following syntax:

- CONTROL statements are introduced by CONTROL START and ended by CONTROL END. The CONTROL keyword must begin in column 1. The CONTROL keyword and START or END must be separated by one blank.
- The keyword of the CONTROL statement (PROTOCOL, CHG_INFO or PROCESS) must begin in column 2. The equal sign (=) must be in column 11. The value must begin in column 13.

```
*V--+-----1=-V--+-----2-----+
  keyword = value
```

- One or more CONTROL statements can be coded between CONTROL START and CONTROL END.

PROTOCOL = ALL

By default, the batch utility B97BUTLT logs in DD IRMLOG all statements that lead to an error and the accompanying error messages.

Use the CONTROL statement PROTOCOL = ALL to log all statements in DD IRMLOG, including those ending with RC=0.

```
*V--+-----1=-V--+-----2-----+
CONTROL START
  PROTOCOL = ALL
CONTROL END
```

CHG_INFO = OLD

The fields CDATE, CTIME, and CUSER contain the date, time, and user ID of the last modification of the record. By default, these fields are updated by B97BUTLT when inserting a new record. This means that the CDATE, DTIME, and CUSER fields of an uploaded record refer to the modification of the record by B97BUTLT.

When uploading records (INSERT) use the CONTROL statement CHG_INFO = OLD, if the values uploaded to these fields are to be preserved.

```
*V--+-----1#-V--+-----2-----+
CONTROL START
  CHG_INFO = OLD
CONTROL END
```

DATEMASK = mask

DATEMASK = *mask* specifies the date format that is used in the BUTLT statements. Legal values are the date formats that are supported by BSA (see online option **P.2**).

Specifying DATEMASK is **required only** in the following cases:

- BUTLT statements use YYYY-MM-DD (International), but the system options (**S.2**) specify a different date mask.
- BUTLT statements use DD/MM/YYYY (British), but the system options (**S.2**) specify a different date mask.

Specifying DATEMASK is **not required** when:

- The date mask of the BUTLT statements and of the system options (**S.2**) is identical
- The BUTLT statements use one of the following date formats:
 - MM/DD/YYYY or MM/DD/YY (American)
 - DD.MM.YYYY or DD.MM.YY (Continental)
 - YYYY.DDD or YY.DDD (Julian)

```
*V--+-----1#-V--+-----2-----+
CONTROL START
  DATEMASK = YYYY-MM-DD
CONTROL END
```

PROCESS = AUTOUPD

Coding the CONTROL statement PROCESS = AUTOUPD causes the following program behavior during INSERT: If inserting a new record fails because a record is already present under this key (BQL infocode 142 - Duplicate key), the program will automatically branch into UPDATE mode and update the corresponding record.

```
*V--+-----1=V--+-----2-----+
CONTROL START
PROCESS = AUTOUPD
CONTROL END
```

Autoupdate requirements and limitations:

- A value must be explicitly coded for each key field.
- Key fields cannot be updated.

RC_KDUPL = level

By default, the occurrence of BQL infocode 142 leads to B97BUTLT ending with RC=20. (BQL infocode 142 (Duplicate key) means: Insertion has failed because a record with the same key already exists.) You can use RC_KDUPL to define a different return code for this error case. Legal values are:

```
RC_KDUPL = OKAY           (corresponds to RC=0)
RC_KDUPL = WARNING       (corresponds to RC=4)
RC_KDUPL = ERROR         (corresponds to RC=8)
```

Notes:

RC_KDUPL = *level* cannot be used in combination with PROCESS = AUTOUPD. If both are coded, RC_KDUPL = *level* will be ignored.

RC_KDUPL takes effect only if BQL infocode 142 is the only error that occurred during the insertion of records. If other errors have occurred in addition to or instead of BQL infocode 142, RC_KDUPL = *level* has no effect, and the program will end with RC=20.

```
*V--+-----1=V--+-----2-----+
CONTROL START
RC_KDUPL = level
CONTROL END
```

- Return codes**
- 0** The program terminated normally.
 - 4** The program did not find any data to be inserted, updated, or deleted; the program terminated normally.
 - 20** One of the following errors occurred:
 - Missing DD statement
 - Error while opening the database or a dataset
 - Error during command execution
 - Syntax error in DD SYSIN
 - Logical error in DD SYSIN (e.g. referenced definition not found)
 Check DD IRMLOG to find out what caused the error.
 - 24** The subsystem is not available.
 - 32** One of the following errors occurred:
 - Invalid security level (ADM required)
 - The batch utility was started using SIGNON=NO, but the master subsystem is active

IRMLOG

DD IRMLOG contains a summary activity log.

DD IRMLOG also logs all definitions that lead to an error. You can edit and then reuse this log as input for B97BUTLT. The program will ignore all messages in the log.

```

+-----+
|IRM1561I PROGRAM: B97BUTLT VERSION: V7R2M00 PTFVLV: ptflvl COMPILED: date,time
|IRM4000I B97BUTLT UPLOAD UTILITY STARTED - DATE: date, TIME: time
|IRM4100I *****
|IRM4008I ADMINISTRATOR SECURITY LEVEL SET FOR USER B97ADM
|IRM4100I -----
|UPDATE TABLE SYS
| SYSTITLE = "THIS IS THE NEW TITLE OF MY DEFINITION " -
| "BUT IF TOO LONG IT WILL LEAD TO A VALUE CONVERSION ERROR"
|WHERE
| SSID EQ "B97P"
|IRM3566E - 6 VALUE CONVERSION ERROR - VALUE OF FIELD SYSTITLE COULD NOT BE CONVERTED TO INTERNAL FORMAT
|IRM4003E COMMAND ERROR RC( 20)
|IRM4100I -----
|IRM4998I 1 SYS - COMMANDS PROCESSED (IN ERROR: 1)
|IRM4998I 1 total - COMMANDS PROCESSED (IN ERROR: 1)
|IRM4100I *****
|IRM4999I B97BUTLT UPLOAD UTILITY ENDED - DATE: date, TIME: time, RC: 0020
+-----+

```

Authorization

Following the standard security check for the BUE function, the ADM authorization (profile B97.ssid.ADM) of the submitting user is checked. If the user has the access authorization ACCESS=READ, the specified INSERT, UPDATE and DELETE commands are carried out without individual security check. If the user does not have this authorization, the authorization is checked before each individual command.

Modifying the table IGR requires that the submitter has ADM authorization and that the started task is stopped (SIGNON=NO).

B97DAILY: Daily job

Daily maintenance

These batch utilities should run on a regular (preferably daily) basis:

1. Archive batch utility
2. Archive cleanup batch utility
3. Cache cleanup batch utility
4. Online spool cleanup batch utility
5. Notes cleanup batch utility
6. Message cleanup batch utility

For your convenience, you should use the tailored batch utility B97DAILY, which includes all these utilities in the right order.

B97DBVER: Database verification utility

Overview

The database verification utility (B97DBVER) checks the version of the Adabas Audit Data Retrieval database.

You can use this program to check whether all required database updates have been applied to the database used by a given Adabas Audit Data Retrieval subsystem.

Running B97DBVER

Run the database verification utility when you encounter messages during online or batch processing that may be caused by a database error, for example, TABLE NOT FOUND or FIELD NOT FOUND.

Tailored JCL for this job can be found in member B97DBVER in the BETA97.CNTL.

JCL

```

+-----+
|jobcard
|//B97DBVER EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97DBVER',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//B97DEF DD DUMMY
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//*
|//IRMLOG DD SYSOUT=*
|//IRMERROR DD SYSOUT=*
|//*
|//IRMPRINT DD SYSOUT=*
|//BQLPRINT DD SYSOUT=*
|//SYSPRINT DD SYSOUT=*
|//*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
+-----+

```

Return codes

- 0** All required database changes are installed.
- 16** The database level is **not** up-to-date.
Check which database updates are missing and run the appropriate database update jobs before starting to work with this database.
- 20** This return code can occur due to several reasons:
- DD statement missing (*)
 - Error when opening a log file (*)
 - Error when initializing the database access (*)
 - Database access error (*)
- 24** Communication error
- 32** BQL abend
- 36** BQL command error

Note: (*) indicates standard return codes that can be modified (see "Return codes" on page 224).

IRMPRINT

The following log is written to DD IRMPRINT. It contains a list of all database updates.

```

+-----+
|Date: date      Product: Beta 97      VERIFY DATABASE CHANGES IN :      Page: 1
|Time: time     Version: V7R2                    BETA97.DB.DEF
+-----+
|Table  Field    Version PTF-No.   BSA-Level  Installed Installation Member
+-----+
|...
|LAY    LAYDYNV1  4.3.0  New       BSA0943-03 YES
|IGR    SRCOBT   4.3.0  New       BSA0943-03 YES
|ADS    ADSEATTR  4.3.0  PIR3084   BSA0943-03 YES
|
|IGR    IGRMPABS  6.1.0  New       BSA1461-00 YES
|EXTUPR UPRBR001  6.1.0  New       BSA1461-00 YES
|LGFCTL LGFPROD   6.1.0  New       BSA1461-00 YES
|LGFFLD LGFPROD   6.1.0  New       BSA1461-00 YES
|LGFREC LGFPROD   6.1.0  New       BSA1461-00 YES
|LGFREP LGFPROD   6.1.0  New       BSA1461-00 YES
|LGFSYS LGFPROD   6.1.0  New       BSA1461-00 YES
|LGFFLD LGFPRCF1  6.1.0  PIR6040   BSA1461-01 YES
|LGFREP LGFREPO0  6.1.0  PIR6040   BSA1461-01 YES
|
|LGFFLD LGFFOFMT  7.1.0  New       BSA1771-00 YES
|UGF    INMASK    7.1.0  New       BSA1771-00 YES
|IGR    IGRAFLGS  7.1.0  New       BSA1771-00 YES
+-----+

```

Following is an example of the log if database updates are missing (RC=16):

```

+-----+
|...
|LGFREP LGFPROD   6.1.0  New       BSA1461-00 YES
|LGFSYS LGFPROD   6.1.0  New       BSA1461-00 YES
|LGFFLD LGFPRCF1  6.1.0  PIR6040   BSA1461-01 NO      PIR6040 - SAMPLIB
|LGFREP LGFREPO0  6.1.0  PIR6040   BSA1461-01 NO      PIR6040 - SAMPLIB
+-----+

```

Columns

Column	Description
Table	Name of the affected table
Field	Name of the affected field in this table
Version	Version and release of the database update
PTF Number	PTF number of the database update
BSA-Level	Highest available BSA level at the time when the database update was made available
Installed	YES Database update has been installed NO Database update has not been installed
Installation Member	If updates are missing from the database: Member name and library (SAMPLIB or CNTL) where the database update was made available

IRMLOG

A processing log is written to DD IRMLOG.

```
+-----+
|IRM1561I PROGRAM: B97DBVER  VERSION: V7R2M00  PTFVLV: ptflvl  COMPILED: date, time
|IRM2400I DATABASE VERIFICATION FOR SUBSYSTEM B97P STARTED - DATE: date      TIME: time
|IRM2210I *****
|IRM2210I SSID           : B97P
|IRM2210I SYSTEM         : B97PROD
|IRM2210I LOCATION       : BERLIN
|IRM2210I DEFINITION FILE : BETA97.DB.DEF
|IRM2210I *****
|IRM2499I DATABASE VERIFICATION FOR SUBSYSTEM B97P ENDED  - DATE: date      TIME: time      RC: 0000
+-----+
```

B97DEARC: Archive cleanup batch utility

Overview

The archive cleanup batch utility (B97DEARC) deletes archived lists and indexes from the archive after their archive retention period has expired.

Note

The archive cleanup batch utility removes entries from the Adabas Audit Data Retrieval database, but does not actually delete any archive datasets.

The output printed to DD IRMDEL can be used as input for IDCAMS (DD SYSIN) to delete the datasets that no longer contain any valid archive data.

Running B97DEARC

You should run this utility on a daily basis to ensure that expired data is deleted from the archive.

Tailored JCL for this job can be found in member B97DEARC in the BETA97.CNTL and in the corresponding step of the B97DAILY job.

You can also submit this batch utility online using option **S.3.4**. This will generate JCL from member SE97ACLN of the BETA97.ISPSLIB (skeleton library).

JCL

```

+-----+
|jobcard
|//B97DEARC EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97DEARC',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//B97DEF DD DISP=SHR,DSN=BETA97.DB.DEF
|//*
|//SYSPRINT DD DUMMY
|//IRMLLOG DD SYSOUT=*
|//IRMPRINT DD SYSOUT=*
|//IRMDEL DD SYSOUT=*
|//IRMERROR DD SYSOUT=*
|//*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//*
+-----+

```

Return codes

- 0** The program terminated normally.
- 4** This return code can occur due to several reasons:
 - The program did not find any data to be removed; the program terminated normally.
 - Lists/Reports have been marked for reducing the archive retention period, but the reduction has not been executed.
- >4** One or several errors occurred during processing. Please check the job log DD IRMPRINT for details.

Some return codes are program-specific. Others are standard return codes which can also be modified. More information on standard return codes can be found in "Return codes" on page 224.

IRMLOG

A processing log is written to DD IRMLOG. It contains the following information:

- Total number of lists whose retention period has expired
- The archive batch utility checks all archive datasets containing these lists and all volumes containing these archive datasets. The following information is displayed:
- Number of archive datasets whose records are deleted from the Adabas Audit Data Retrieval database because all data in these datasets have reached their retention period
 - Number of archive datasets containing data that is still active
 - Number of volumes containing archive datasets that are still active

```

+-----+
|IRM1561I PROGRAM: B97DEARC VERSION: V7R2M00 PTFLVL: ptflvl COMPILED: date, time |
|IRM2100I ARCHIVE CLEANUP PROCESSING STARTED - DATE: 12.03.2020, TIME: 09:49:47 |
|IRM2130I ***** |
|IRM2130I 0001234 LIST(S) FOR DELETE SELECTED |
|IRM2130I 0000000 REPORT(S) FOR DELETE SELECTED |
|IRM2130I 0000023 DATASET(S) FOR DELETE SELECTED |
|IRM2130I 0000790 DATASET(S) IN USE SELECTED |
|IRM2130I 0000027 VOLUME(S) IN USE SELECTED |
|IRM2130I ***** |
|IRM2199I ARCHIVE CLEANUP PROCESSING ENDED - DATE: 12.03.2020, TIME: 09:49:54, RC: 0000 |
+-----+
    
```

IRMPRINT

DD IRMPRINT itemizes the lists deleted from the archive. The log contains the following:

- DATE / TIME: Creation date and time of the list/report
- FORM / EXTENSION / REPORT: Name of the list
- PAGES: Number of pages of the list/report
- RETPD: Retention period of the list in days

Note: The LST parameter B97_DEARC_SORT = NO can be used to turn off sorting, which reduces the run time of the archive cleanup job (default is YES).

Date: 13.03.2020		Product: Beta 97		ARCHIVE CLEANUP UTILITY			Page: 1	
Time: 08:34:55		Version: V7R2		DELETED LISTS/REPORTS				
Date	Time	Form	Extension	Report	Pages	Retpd	Reason	
11.03.2020	11:18:43	TC9750	ONLRET1		00001811	000001	0000	
11.03.2020	11:18:58	TC3693	ONLRET1		00001811	000002	0000	
11.03.2020	13:29:06	TC3801	RECHNUNGEN		00001811	000001	0000	
11.03.2020	13:29:19	TC3801	RECHNUNGENBWE		00001811	000001	0000	
11.03.2020	17:19:36	TC3844	RECHNUNGEN		00001811	000001	0000	
11.03.2020	17:42:49	TC3844	RECHNUNGEN		00001811	000001	0000	
11.03.2020	17:43:02	TC3844	RECHNUNGEN		00001811	000001	0000	
11.03.2020	17:44:16	REJ	BALDESCOMPTE		00000005	000001	0000	
11.03.2020	17:44:17	REJ	BALDESCOMPTE		00000005	000001	0000	

Logs when NEWEXPDT in IGR

If the archive expiration date of one or several affected lists has been marked for modification (new archive expiration date NEWEXPDT in IGR), then B97DEARC terminates without deleting data from the Adabas Audit Data Retrieval database. To enable the archive cleanup batch utility (B97DEARC) to delete data, you must first run the batch utility B97AXPDT, which increases the archive expiration date of the archive datasets affected in the Adabas Audit Data Retrieval database.

In this case DD IRMLOG contains the following message:

```

+-----+
|IRM156I PROGRAM: B97DEARC  VERSION: V7R2M00  PTFVLVL: ptflvl  COMPILED: date, time
|IRM2100I ARCHIVE CLEANUP PROCESSING STARTED - DATE: 16.03.2020, TIME: 08:30:40
|IRM2130I *****
|IRM2140E MODIFICATION REQUEST(S) FOUND FOR ARCHIVE EXPIRATION DATE (NEWEXPDT), PROCESSING ABORTED
|IRM2130I *****
|IRM2199I ARCHIVE CLEANUP PROCESSING ENDED - DATE: 16.03.2020, TIME: 08:30:40, RC: 0008
+-----+
    
```

In DD IRMPRINT, B97DEARC itemizes all lists whose archive expiration date has been marked for modification. This report contains the following information:

- DATE / TIME: Date and time of the list
- FORM / EXTENSION / REPORT: Name of the list
- AEXPDT: Original archive expiration date
- NEWEXPDT: New archive expiration date

```

+-----+
| Date: 09.03.2020  Product: Beta 97          ARCHIVE CLEANUP UTILITY          Page: 00001
| Time: 11:39:12   Version: V7R2           LISTS/REPORTS WITH NEWEXPDT SET
+-----+
| Date      Time      Form      Extension      Report      Aexpdt      Newexpdt
+-----+
| 29.08.2015 10:17:09 REJ      TRADE          30.08.2020 30.08.2022
| 30.08.2015 10:17:09 REJ      TRADE          31.08.2020 31.08.2022
| 31.08.2015 10:17:09 REJ      TRADE          01.09.2020 01.09.2022
| ...
+-----+
    
```

IRMDEL

DD IRMDEL lists the datasets whose records have been removed from the Adabas Audit Data Retrieval database because all data archived in these datasets has expired.

The output printed to DD IRMDEL can be used as input for IDCAMS (DD SYSIN) to actually delete the datasets in question.

```

+-----+
| DELETE BETA97.DISK3.ARCH01.E09123.C001
| DELETE BETA97.DISK3.ARCH01.E09123.C002
| DELETE BETA97.DISK3.ARCH01.E09123.C003
| DELETE BETA97.DASD.ARCH00.E09123.C001
| ...
+-----+
    
```

IRMERROR

The report that is written to DD IRMERROR shows the following:

- All lists/reports that have been marked for extending the archive retention period
- All lists/reports that have been marked for reducing the archive retention period, but where the reduction has not yet been executed

B97DECCH: Cache cleanup batch utility

Function

The cache cleanup batch utility (B97DECCH) removes list data whose retention period has expired from the Adabas Audit Data Retrieval cache spool.

The retention period of data in the cache spool is specified using the LST parameter `B97_CLEANUP_CACHE=n` in the B97LSTxx member in the BETA.PARMLIB, where *n* refers to a number of days (default: 5).

Running B97DECCH

You should run this utility on a daily basis to ensure that obsolete list data is deleted from the Adabas Audit Data Retrieval cache spool.

Tailored JCL for this job can be found in member B97DECCH in the BETA97.CNTL and in the corresponding step of the B97DAILY job.

You can also submit this batch utility online using option **S.3.6** from the "Primary Selection Menu". This will generate JCL from member SE97CCLN of the BETA97.ISPSLIB (skeleton library).

JCL

```

+-----+
|jobcard
|//B97DECCH EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97DECCH',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//B97DEF DD DISP=SHR,DSN=BETA97.DB.DEF
|//*
|//IRMLLOG DD SYSOUT=*
|//IRMERROR DD SYSOUT=*
|//IRMPRINT DD SYSOUT=*
|//SYSPRINT DD DUMMY
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//*
+-----+

```

Return codes

- 0** The program terminated normally.
- 4** The program did not find any data to be removed; the program terminated normally.
- >4** One or several errors occurred during processing. Please check the job log for details.

Some return codes are program-specific. Others are standard return codes which can also be modified. More information on standard return codes can be found in "Return codes" on page 224.

IRMLOG

A processing log is written to DD IRMLOG. It contains the following information:

- Current value of the LST parameter B97_CLEANUP_CACHE, which determines the retention period of data in the cache spool; the batch utility B97DECCH deletes all data that has not been accessed for the specified number of days.
- Usage of cache spool in percent before B97DECCH
- Number of 4-MB blocks of data processed and number of 4-MB blocks of data deleted
- Usage of cache spool in percent after B97DECCH

```

+-----+
|IRM1561I PROGRAM: B97DECCH  VERSION: V7R2M00  PTFVLV: ptflvl  COMPILED: date, time
|IRM2100I CACHE CLEANUP PROCESSING STARTED - DATE: 12.03.2020, TIME: 11:06:14
|IRM2130I *****
|IRM2130I CACHE CLEANUP HAS BEEN STARTED FOR THE LAST 0005 DAYS
|IRM2130I 050 % OF CACHE DATASETS ARE USED
|IRM2130I 0001500 OBJECTS PROCESSED AND 0000750 OBJECTS DELETED
|IRM2130I 025 % OF CACHE DATASETS ARE USED
|IRM2130I *****
|IRM2199I CACHE CLEANUP PROCESSING ENDED - DATE: 12.03.2020, TIME: 11:06:14, RC: 0000
+-----+

```

B97DELOG: Log messages cleanup batch utility

Overview

The log messages cleanup batch utility (B97DELOG) deletes or prints the messages in the Adabas Audit Data Retrieval message database.

Running B97DELOG

You should run this utility at regular intervals to delete obsolete messages from this database.

Tailored JCL for this job can be found in member B97DELOG in the BETA97.CNTL and in the corresponding step of the B97DAILY job.

You can also submit this batch utility online using option **S.3.5**. This will generate JCL from member SE97LCLN of the BETA97.ISPSLIB (skeleton library).

JCL

```

+-----+
|jobcard
|//B97DELOG EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97DELOG',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,
|//          DSN=BETA97.LOAD
|//          DD DISP=SHR,
|//          DSN=BSA.LOAD
|//*
|//SFFPARM DD DISP=SHR,
|//          DSN=BETA.PARMLIB
|//B97DEF DD DISP=SHR,
|//          DSN=BETA97.DB.DEF
|//*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//SYSPRINT DD DUMMY
|//IRMPRINT DD SYSOUT=*
|//IRMLOG DD SYSOUT=*
|//IRMERROR DD SYSOUT=*
|//*
|//SYSIN DD *
|parameters
|//*
+-----+

```

- Return codes**
- 0** The program terminated normally (*)
 - 4** No messages are available for deletion (*)
 - 12** Component error
 - 16** Not enough memory
 - 20** This return code can occur due to several reasons:
 - DD statement missing (*)
 - Error when opening a log file (*)
 - Error when initializing the database access (*)
 - Database access error (*)
 - 24** Communication error
 - 32** BQLabend
 - 36** BQL command error

Note: (*) indicates standard return codes that can be modified (see "Return codes" on page 224).

SYSIN parameters All SYSIN parameters are optional.

Parameter	Description
ANALYZE YES NO	<p>NO The program deletes the messages from the message database and logs the executed actions (default)</p> <p>YES The program runs in analyze mode (simulation); No data is deleted, only logs are created.</p>
LASTHOURS <i>n</i>	<p>Deletes only messages that are older than <i>n</i> hours. The messages of the last <i>n</i> hours are preserved.</p> <p>Allowed values: 0..9999 (Default: 0)</p>

IRMPRINT The following log is written to DD IRMPRINT. It contains all the messages that were deleted from the MSG database.

```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Date: 27.03.2020 Product: Beta 97          LOG-MSG CLEANUP UTILITY          Page: 1 |
| Time: 08:21:44  Version: V7R2           |                                  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Date      Time      Message Text                                     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 24.03.2020 09:12:20 - IRM1700I (REJ      ,TRADE      ,      ) INDEX PROCESSING STARTED |
| 24.03.2020 09:12:30 - IRM1702I (REJ      ,TRADE      ,      ) INDEX PROCESSING ENDED   |
| 24.03.2020 09:15:20 - IRM1700I (REJ      ,TRADE      ,      ) INDEX PROCESSING STARTED |
| 24.03.2020 09:15:30 - IRM1702I (REJ      ,TRADE      ,      ) INDEX PROCESSING ENDED   |
| 24.03.2020 09:18:20 - IRM1700I (REJ      ,TRADE      ,      ) INDEX PROCESSING STARTED |
| 24.03.2020 09:18:30 - IRM1702I (REJ      ,TRADE      ,      ) INDEX PROCESSING ENDED   |
| ...                                             |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
    
```

IRMLOG

A processing log is written to DD IRMLOG.

```
+-----+
|IRM1561I PROGRAM: B97DELOG VERSION: V7R2M00 PTFVLV: ptflvl COMPILED: date, time |
|IRM2100I LOG-MSG CLEANUP PROCESSING STARTED - DATE: 27.03.2020, TIME: 08:21:44 |
|IRM2130I ***** |
|IRM1901D ANALYZE = NO |
|IRM1901D LASTHOURS = 48 |
|IRM2130I ***** |
|IRM2199I LOG-MSG CLEANUP PROCESSING ENDED - DATE: 27.03.2020, TIME: 08:21:44, RC: 0000 |
+-----+
```

B97DENTE: Notes cleanup batch utility

Overview

The notes cleanup batch utility (B97DENTE) deletes browser notes that are attached to lists that are no longer available (expired or deleted).

Running B97DENTE

You should run this batch utility at regular intervals to ensure that obsolete notes are deleted from the database.

Tailored JCL for this job can be found in member B97DENTE in the BETA97.CNTL and in the corresponding step of the B97DAILY job.

You can also submit this batch utility online via option **S.3.7**.

This will generate JCL from member SE97NCLN of the BETA97.ISPSLIB (skeleton library).

JCL

```

+-----+
|jobcard
|//B97DENTE EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97DENTE',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//B97DEF DD DUMMY
|//*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//SYSPRINT DD DUMMY
|//IRMPRINT DD SYSOUT=*
|//IRMLLOG DD SYSOUT=*
|//IRMERROR DD SYSOUT=*
|//*
+-----+

```

Return codes

- 0** The program terminated normally.
- 4** The program did not find any data to be removed; the program terminated normally.
- >4** One or several errors occurred during processing. Please check the job log for details.

Some return codes are program-specific. Others are standard return codes which can also be modified. More information on standard return codes can be found in "Return codes" on page 224.

IRMLOG

DD IRMLOG contains a summary log listing the number of notes processed and released.

```
+-----+
|IRM1561I PROGRAM: B97DENTE  VERSION: V7R2M00  PTFVLV: ptfLvl  COMPILED: date, time
|IRM2100I NOTES  CLEANUP PROCESSING STARTED - DATE: 13.03.2020, TIME: 11:23:31
|IRM2130I *****
|IRM2130I List(s) processed: 2103
|IRM2130I Note(s) processed: 26
|IRM2130I Note(s) deleted..: 1
|IRM2130I *****
|IRM2199I NOTES  CLEANUP PROCESSING ENDED   - DATE: 13.03.2020, TIME: 11:23:31, RC: 0000
+-----+
```

B97DEONL: Online spool cleanup batch utility

Function

The online spool cleanup batch utility (B97DEONL) does the following:

- It removes all indexes whose online retention period has expired from the Adabas Audit Data Retrieval index spool.
- It removes all lists whose online retention period has expired from the Adabas Audit Data Retrieval online spool. The Adabas Audit Data Retrieval online spool contains:

- Lists that have been read in by B97RDR00
- Lists that have been reloaded from the archive

The online retention period of these lists and their indexes is determined in the B97LSTxx member using the LST parameters B97_CLEANUP_RELOAD_LIST=*n* and B97_CLEANUP_RELOAD_INDEX=*n*, where *n* refers to a number of days (default: 5).

- It updates the Adabas Audit Data Retrieval IGR (indexed list generation record) of each list whose online retention period has expired.

The online status in the generation record of the indexed list is changed from online to offline.

Exception: Lists still waiting to be archived (archive status **Pend**) will not be processed, even if their Adabas Audit Data Retrieval online retention period has expired.

Note:
Lists marked for deletion

If a list has been marked for deletion manually, the list and its indexes are processed by the online spool cleanup batch utility in the same manner as lists whose Adabas Audit Data Retrieval online retention period has expired.

However, a list marked for deletion manually will be deleted even if its archive status is **Pend**.

Running B97DEONL

You should run this utility on a daily basis to delete obsolete list data from the Adabas Audit Data Retrieval online spool.

Tailored JCL for this job can be found in member B97DEONL in the BETA97.CNTL and in the corresponding step of the B97DAILY job.

You can also submit this batch utility online via option **S.3.3**. This will generate JCL from member SE97OCLN of the BETA97.ISPSLIB (skeleton library).

JCL

```

+-----+
|jobcard
|//B97DEONL EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97DEONL',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//B97DEF DD DISP=SHR,DSN=BETA97.DB.DEF
|//*
|//IRMLLOG DD SYSOUT=*
|//IRMERROR DD SYSOUT=*
|//IRMPRINT DD SYSOUT=*
|//SYSPRINT DD DUMMY
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//*
|//SYSIN DD *
|parameters
|/*
+-----+

```

Return codes

- 0** The program terminated normally.
- 4** The program did not find any data to be removed; the program terminated normally.
- >4** One or several errors occurred during processing. Please check the job log for details.

Some return codes are program-specific. Others are standard return codes which can also be modified. More information on standard return codes can be found in "Return codes" on page 224.

SYSIN parameters All SYSIN parameters are optional.

Parameter	Description
ANALYZE YES NO	<p>NO The program deletes affected lists and indexes from the spools and logs the executed actions (default)</p> <p>YES The program runs in analyze mode (simulation); No data is deleted, only logs are created.</p>

IRMLOG DD IRMLOG contains a summary log listing the number of lists and indexes processed and deleted.

```

-----+
|IRM1561I PROGRAM: B97DEONL VERSION: V7R2M00 PTFLVL: ptflvl COMPILED: date, time |
|IRM2100I ONLINE CLEANUP PROCESSING STARTED - DATE: 13.03.2020, TIME: 09:43:53 |
|IRM2130I ***** |
|IRM2130I 0001228 LIST(S)/REPORT(S) PROCESSED (1) |
|IRM2130I 0000234 LIST(S)/REPORT(S) ONLINE (2) |
|IRM2130I 0000994 LIST(S)/REPORT(S) OFFLINE WITH ONLINE INDEX(ES) (3) |
|IRM2130I INDEX(ES) OF 0000036 ONLINE LIST(S)/REPORT(S) DELETED (4) |
|IRM2130I INDEX(ES) OF 0000002 OFFLINE LIST(S)/REPORT(S) DELETED (5) |
|IRM2130I 0000137 LIST(S)/REPORT(S) DELETED (6) |
|IRM2130I 0000007 RELOAD LIST(S)/REPORT(S) DELETED (7) |
|IRM2130I ***** |
|IRM2199I ONLINE CLEANUP PROCESSING ENDED - DATE: 13.03.2020, TIME: 09:44:05, RC: 0881 |
-----+
    
```

The following comments refer to the line numbers inserted in the right border of the log:

(1) is the total number of list/report generations that are processed by B97DEONL in this run. This number can be divided into the following groups:

- List/Report is online, but does not have the status Archive Pending (2)
- List/Report is offline, but at least one index of this offline list/report is online (3)

This means: Lists/Reports where both the document and all indexes are offline are not included in (1). Neither are lists/reports with status Archive Pending.

The following lines (4-7) log the deletion of data from the corresponding spools.

IRMPRINT

DD IRMPRINT itemizes the lists released. The log contains the following:

- DATE / TIME: Creation date and time of the list/report
- FORM / EXTENSION / REPORT: Name of the list
- PAGES: Number of pages
- RETPD: Expiration date
- STATUS: Status or internal return code

For a list of internal return codes, see "Internal return codes" in *Adabas Audit Data Retrieval Messages and Codes*; status can be one of the following:

- EXPIRED (list whose retention period has expired)
- RELOAD (reloaded list whose retention period has expired; the retention period of reloaded lists is determined using the LST parameter B97_CLEANUP_RELOAD_LIST)
- DELETE (list that has been marked manually for deletion)

```

+-----+
|Date: 13.03.2020 Product: Beta 97          ONLINE CLEANUP UTILITY          Page: 1
|Time: 09:43:53  Version: V7R2
|
|Date      Time      Form      Extension      Report      Pages      Expired      Status
|-----|
|10.03.2020 10:08:37 ARCH      TAPE101        00000003      11.03.2020 EXPIRED
|10.03.2020 10:08:37 ARCH      TAPE9999        00000012      11.03.2020 EXPIRED
|10.03.2020 10:08:38 ARCH      DISK10000       00000012      11.03.2020 EXPIRED
|10.03.2020 10:08:39 ARCH      TAPE101         00000003      11.03.2020 EXPIRED
|10.03.2020 10:08:39 ARCH      TAPE9999        00000012      11.03.2020 EXPIRED
|10.03.2020 10:08:40 ARCH      DISK10000       00000012      11.03.2020 EXPIRED
|10.03.2020 10:08:41 ARCH      TAPE101         00000003      11.03.2020 EXPIRED
|10.03.2020 10:08:41 ARCH      TAPE9999        00000012      11.03.2020 EXPIRED
|10.03.2020 10:08:42 ARCH      DISK10000       00000012      11.03.2020 EXPIRED
|10.03.2020 10:08:43 ARCH      TAPE101         00000003      11.03.2020 EXPIRED
|10.03.2020 10:08:44 ARCH      TAPE9999        00000012      11.03.2020 EXPIRED
|10.03.2020 10:08:44 ARCH      DISK10000       00000012      11.03.2020 EXPIRED
|10.03.2020 10:08:45 ARCH      TAPE101         00000003      11.03.2020 EXPIRED
|10.03.2020 10:08:46 ARCH      TAPE9999        00000012      11.03.2020 EXPIRED
|10.03.2020 10:08:46 ARCH      DISK10000       00000012      11.03.2020 EXPIRED
|...
+-----+
    
```

IRMERROR

DD IRMERROR itemizes the lists whose expiration date has been reached, but which were **not** deleted. The log contains the following:

- DATE / TIME: Date and time of the list
- FORM / EXTENSION / REPORT: Name of the list
- SSID: always blank in Adabas Audit Data Retrieval
- REASON: Reason (Archive pending or internal return code; for a list of internal return codes, see "Internal return codes" in *Adabas Audit Data Retrieval Messages and Codes*)

```

+-----+
|Date: 13.03.2020 Product: Beta 97          ONLINE CLEANUP UTILITY          Page: 1 |
|Time: 09:43:53  Version: V7R2              ERROR LOG                       |
|-----+-----+-----+-----+-----+-----+-----+-----+
|Date      Time      Form      Extension  Report      Ssid Reason |
|-----+-----+-----+-----+-----+-----+-----+
|09.03.2020 08:38:19 - TC4180  HANDEL      |              | Archive pending |
|26.02.2020 10:03:44 - TC3980  RECHNUNGEN |              | Archive pending |
|10.03.2020 10:31:28 - ARCH    TAPE10      |              | Archive pending |
+-----+-----+-----+-----+-----+-----+-----+

```

Note on RC=0881

This return code occurs if a reloaded list has not yet reached its retention period and can be ignored. The retention period of reloaded lists is specified via the LST parameter B97_CLEANUP_RELOAD_LIST.

B97DEUGF: UGF table cleanup batch utility

Overview

Adabas Audit Data Retrieval saves search terms used in queries in the UGF table (Option **C.U**). The entries in the UGF table are used for prepopulating fields when the same user carries out a future search involving the same index. The batch utility B97DEUGF enables you to delete obsolete entries from the UGF table.

JCL

You can find sample JCL for this batch utility in the BETA97.CNTL in member B97DEUGF.

```

+-----+
|jobcard
|//B97BUGEN EXEC PGM=BST01RFF,REGION=0M,PARM=( 'S=97',
|//          'PGM=B97DEUGF',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//B97DEF DD DUMMY
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//*
|//SYSPRINT DD SYSOUT=*
|//IRMLOG DD SYSOUT=*
|//IRMPRINT DD SYSOUT=*
|//*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//*
|//SYSIN DD *
|parameters
|/*
+-----+

```

Return codes	0	The program terminated normally.
	4	This return code can occur due to several reasons: <ul style="list-style-type: none"> • No data found for at least one selection • A warning was issued
	12	Component error
	16	<ul style="list-style-type: none"> • Out of memory
	20	This return code can occur due to several reasons: <ul style="list-style-type: none"> • DD statement missing (*) • Error when opening a log file (*) • Error when initializing the database access (*) • Database access error (*) • Syntax error
	24	Communication error
	32	BQLabend
	36	BQL command error

Note: (*) indicates standard return codes that can be modified (see "Return codes" on page 224).

Syntax DD SYSIN

DD SYSIN contains:

- One statement block with general processing parameters like the amount of information to be printed in the log (FULLLISTINFO) and its page length (LINESPERPAGE); these specifications apply to the entire program run.
- One or more selection blocks that are introduced by the following line:
DELETE = GENERATION
This line is followed by the statements that control the selection of entries for deletion.

Each statement is coded on a separate line and is structured as follows:

keyword = *value*

The equal sign (=) is optional in all statements. To mark a line as comment line, enter an asterisk (*) in the first column of the line. If a value is blank, enter a blank enclosed in single quotation marks, for example:

EXTENSION = ' '

Keywords for processing

Keyword	Parameter	Description	Option	Mask	Default	Length
ANALYZE	YES NO	Analyze mode	Optional	No	NO	3
FULLLISTINFO		Controls the amount of information	Optional	No		
LINESPERPAGE	<i>nn</i>	Page length (number of lines) of the log	Optional	No	Value from option S.2	2
DATEMASK	date mask	Date format for date specification	Optional	No	System date mask (S.2)	10

FULLLISTINFO controls the amount of information logged for each list in DD IRMPRINT. If the keyword is present, the list/report/folder names are included in DD IRMPRINT together with the number of indexes . If the keyword is not coded, only the list/report/folder count is included.

Specify DATEMASK=*datemask* if your date specifications (SDATE/EDATE) are in a different format from the system date mask (option **S.2**).

Keywords for user-based selection

A selection block for user-based deletion begins with the instruction DELETE GENERATION (required), which is followed by the desired user-based selection criteria. Instead of a date, you can also use the keywords TODAY, YESTERDAY, and MONDAY through SUNDAY.

Keyword	Format/Length	Description	Default	Required	Masks
DELETE	GENERATION			Yes	No
USER	8 characters	User ID		Yes	Yes
SDATE	The date must be coded in accordance with DATEMASK (default: system date mask from option S.2)	Start date	*	No	No
EDATE	See SDATE	End date	TODAY	No	No

Keywords for list-based selection

A selection block for list-based deletion begins with the instruction DELETE GENERATION (required), which is followed by the desired list-based selection criteria. Instead of a date, you can also use the keywords TODAY, YESTERDAY, and MONDAY through SUNDAY.

Keyword	Format/Length	Description	Default	Required	Masks
DELETE	GENERATION			Yes	No

Keyword	Format/Length	Description	Default	Required	Masks
PROCESS	ALL REPORT LIST	Process lists, reports or both		Yes	No
FORM	8 characters	Form name	*	No	Yes
EXTENSION	16 characters	Extension name	*	No	Yes
REPORT	16 characters	Report name	*	No	Yes
SDATE	The date must be coded in accordance with DATEMASK (default: system date mask from option S.2)	Start date	*	No	No
EDATE	See SDATE	End date	TODAY	No	No

Keywords for folder-based selection

A selection block for folder-based deletion begins with the instruction DELETE GENERATION (required), which is followed by the desired folder-based selection criteria. Instead of a date, you can also use the keywords TODAY, YESTERDAY, and MONDAY through SUNDAY.

Keyword	Format/Length	Description	Default	Required	Masks
DELETE	GENERATION			Yes	No
FOLDER	32 characters	Folder name		Yes	Yes
OWNER	8 characters	Owner name	*	No	Yes
SDATE	The date must be coded in accordance with DATEMASK (default: system date mask from option S.2)	Start date	*	No	No
EDATE	See SDATE	End date	TODAY	No	No

Example

```
//SYSIN DD *
ANALYZE      = YES
FULLLISTINFO
*
DELETE GENERATION
  USER       = REINH*
*
DELETE GENERATION
  PROCESS    = REPORT
  FORM       = REJ
  EXTENSION  = BALDESCOMPTE
*
DELETE GENERATION
  FOLDER     = *
  OWNER      = DOCU
/*
```

IRMPRINT

The log that is written to DD IRMPRINT contains information on the entries that were selected for deletion.

Date: <i>date</i>	Product: beta docz plus	PROFILE CLEANUP UTILITY			Page: 1
Time: <i>time</i>	Version: V7R2	USER PROCESSING			
User	Form	Extension	Report	#Idx	
REINH1	FNR102	TC4024-QASF102	FILE_102	0006	
REINH1	FNR103	TC4024-QASF103	FILE_103	0005	
REINH1	FNR104	TC4024-QASF104	FILE_104	0004	

IRMLOG

A processing log is written to DD IRMLOG.

```
IRM1561I PROGRAM: B97DEUGF VERSION: V7R2M00 PTFVLV: ptflvl COMPILED: date, time
IRM2100I PROFILE CLEANUP PROCESSING STARTED - DATE: date, TIME: time
IRM2130I *****
IRM1901D FULLLISTINFO
IRM1901D DELETE GENERATION
IRM1901D USER REINH1
IRM2210I -----
IRM2130I User(s) processed: 1
IRM2130I List(s) processed: 0
IRM2130I Report(s) processed: 3
IRM2130I Folder(s) processed: 0
IRM2130I Index(es) processed: 15
IRM2130I *****
IRM2199I PROFILE CLEANUP PROCESSING ENDED - DATE: date, TIME: time, RC: 0000
```

B97DLOAD: Download batch utility

Overview

The download batch utility (B97DLOAD) reads data from the Adabas Audit Data Retrieval database and writes it to a sequential dataset.

You can find a tailored JCL for this utility in the BETA97.CNTL in member B97DLOAD.

Use DD SYSIN to specify which data should be extracted from the database.

The corresponding upload utility is B97BUTLT (see page 256).

SYSIN syntax

Use a BQL SELECT statement to specify which data should be downloaded:

```
SELECT TABLE tablename -  
        FIELDS(field_1,field_2,...,field_n) -  
        WHERE (field operator value)
```

The WHERE condition is optional. If a value in the WHERE condition contains blanks, it must be enclosed in double quotation marks ("*value with blanks*").

Specify FIELDS(*) to extract all fields.

The continuation sign - (hyphen) may be placed anywhere at the end of the line.

To mark a line as comment line, enter an asterisk (*) in the first column of the line.

Examples

This example downloads all Adabas Audit Data Retrieval list/report definitions:

```
+-----+
|//SYSIN  DD  *
|  SELECT TABLE LDR FIELDS(*)
+-----+
```

This example downloads the FORM and EXTENSION fields of the Adabas Audit Data Retrieval list/report definitions:

```
+-----+
|//SYSIN  DD  *
|  SELECT TABLE LDR FIELDS(FORM,EXTENSION)
+-----+
```

This example downloads the FORM and EXTENSION fields of the Adabas Audit Data Retrieval list/report definitions whose owner is CUST001:

```
+-----+
|//SYSIN  DD  *
|  SELECT TABLE LDR FIELDS(FORM,EXTENSION) -
|          WHERE (OWNER EQ CUST001)
+-----+
```

This example downloads the FORM and EXTENSION fields of the Adabas Audit Data Retrieval list/report definitions whose owner matches the mask CUST*:

```
+-----+
|//SYSIN  DD  *
|  SELECT TABLE LDR FIELDS(FORM,EXTENSION) -
|          WHERE (OWNER LIKE CUST*)
+-----+
```

This example downloads the FORM and EXTENSION fields of the Adabas Audit Data Retrieval list definitions whose title contains GENERATED BY:

```
+-----+
|//SYSIN  DD  *
|  SELECT TABLE LDR FIELDS(FORM,EXTENSION) -
|          WHERE (LTITLE LIKE "*GENERATED BY*" -
|          AND REPORT EQ " ")
+-----+
```

**BYTE and FLAG fields
Important**

The values of BYTE and FLAG fields must be specified using the external format. The corresponding language-dependent values must be specified in English.

Example

All list definitions where item processing mode is selected:

```
SELECT TABLE LDR FIELDS(*) -
          WHERE (ITEM_PROCESSING_MODE = YES)
```

Records of all archive datasets that are not cataloged:

```
SELECT TABLE AGR FIELDS(*) -
          WHERE (AGRCAT = "NOT CATALOG")
```

Use the database dictionary (option **D.2**) to find out about legal values.

JCL

```

+-----+
|jobcard
|//B97DLOAD EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97DLOAD',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,
|//          DSN=BETA97.LOAD
|//          DD DISP=SHR,
|//          DSN=BSA.LOAD
|//*
|//B97DEF DD DUMMY
|//SFFPARM DD DISP=SHR,
|//          DSN=BETA.PARMLIB
|//*
|//SYSPRINT DD SYSOUT=*
|//IRMLLOG DD SYSOUT=*
|//*
|//IRMPRINT DD DISP=(NEW,CATLG,DELETE),
|//          SPACE=(CYL,(10,2),RLSE),
|//          DSN=datasetname
|//*
|//SFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//*
|//SYSIN DD *
| SELECT TABLE name FIELDS(*)
|/*
+-----+

```

Return codes

- 0** The program terminated normally (*)
- 4** For at least one selection, the program did not find any data to be downloaded; the program terminated normally. (*)
- 12** Component error
- 16** Not enough memory
- 20** This return code can occur due to several reasons:
- DD statement missing (*)
 - Error when opening a log file (*)
 - Syntax error in DD SYSIN (command error) (*)
 - Error while initializing the database access (*)
 - Database access error (*)
- 24** Communication error
- 32** BQL abend
- 36** BQL command error

Note: (*) indicates standard return codes that can be modified (see "Return codes" on page 224).

Adabas Audit Data Retrieval tables

Following is a list of database tables used by Adabas Audit Data Retrieval together with the corresponding online options. The database also contains other tables for internal use.

Table	Table long name	Online option
ADP	ARCHIVE DATASET POOL	Option A.1
ADS	ARCHIVE DATASET DEFINITION	Option A.1 , line command A
ADT	ARCHIVE DEVICE TABLE	Option A.4
AGR	B97 AGR	Option A.2
AVR	ARCHIVE VOLUME RECORD	Option A.3
DOG	DISPLAY ORDER GROUP ENTRY	Option 2.6 , line command L
DON	DISPLAY ORDER GROUP NAME	Option 2.6
FGN	FOLDER GROUP NAMES	Option 2.5
FGR	FOLDER GROUP RELATIONS	Option 2.5 , line command F
GLN	GROUP LIST REPORT NAME	Option 2.4
GLP	GLOBAL INDEX PROCESSING RULE	Option 2.4 , line command P
GLR	GROUP LIST REPORT	Option 2.4 , line command L
IAR	IAR ARGUMENT	Option 1 , line command IR
IDR	INDEX DESCRIPTION	Option 2.3
IDX	INDEX ARGUMENT	Option 2.1 , line command IX
IGL	INTERNAL GLOBAL INDEX	Option 3.1 and 3.2
IGR	INDEXED LIST GENERATION	Option 1 and I
LDR	LIST REPORT DEFINITION	Option 2.1
MAC	USER BROWSE MACRO	Option C.2
MSG	MESSAGE	Option M
NTE	USER BROWSE NOTE	Option 1 , Browser
RLD	RELOAD QUEUE TABLE	Option 3.3
RPG	RPG BATCH REPORT DEFINITION	Option S.4
RST	REMOTE SYSTEM TABLE	Option S.1
SAA	SEARCH ARGUMENT VALUE	Option 2.2 , line command A
SAS	SEARCH ARGUMENT ID	Option 2.2
SYS	SYSTEM	Option S.2

Table	Table long name	Online option
UGF	USER GENERATION PROFILE	Option C.U
VCI	USER TABLE	Option C.1

B97GLOBL: Global index batch utility

Function The global index batch utility (B97GLOBL) updates the global indexes in accordance with the requests that it finds in the internal global index records (IGL).

Executing B97GLOBL How often you have to run this batch utility depends on the intervals at which you would like to update the global indexes.

There is no need to run this batch utility if you do not work with global indexes.

JCL

```

+-----+
|jobcard
|//B97GLOBL EXEC PGM=BST01RFF,REGION=0M,PARM=( 'S=97',
|//          'PGM=BST00GBL',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//B97DEF DD DISP=SHR,DSN=BETA97.DB.DEF
|//*
|//IRMPROT DD SYSOUT=*
|//SYSPRINT DD DUMMY
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//*
+-----+

```

- Return codes**
- 0** The program terminated normally.
 - 4** The program did not find any internal global index records (IGL) for processing; the program terminated normally.
 - 8** The program has found requests in the internal global index records (IGL), which it could not process. Normally the reason is that no matching processing instructions could be found (see "Example: Error analysis and troubleshooting" on page 115).
 - 16** Other errors occurred during processing. Please check the job log for details.

Some return codes are program-specific. Others are standard return codes which can also be modified. More information on standard return codes can be found in "Return codes" on page 224.

IRMPROT

DD IRMPROT contains a list of all activities of the batch utility during the update of the global indexes.

The number of internal global index records, which are being processed by B97GLOBL in this run, are located at the beginning of the log, in the example:

- A total of 4, which are subdivided in:
 - 2 requests for inserting in the global index (Insert)
 - 2 request for removing from the global index (Delete)

```

+-----+-----+-----+-----+-----+
| GLOBAL INDEX UTILITY          DATE: date          PAGE: 00001 |
+-----+-----+-----+-----+-----+
| INDEX RECORDS (IGL) FOUND : 000004 FOR INSERT : 000002 FOR DELETE : 000002 |
| ...                                                                    |

```

The following values are output for each global index, which is updated in this run:

- Folder name
- Index name
- Owner
- Validity of the processing instruction
- Number of processed IGLs (Insert and Delete)
- Values for each updated index

```

| ...                                                                    |
| START FOR GLOBAL : REJ-TRADE                                          |
|           INDEX  : ORDER                                              |
|           OWNER  : CUST001                                            |
| Values for the first index                                           |
| ...                                                                    |

```

The values are output in detail for each updated unit.

Example for Insert

```

...
START : 01.04.2009  END : 30.06.2009      / (IGL) INSERT : 00001
                                           DELETE  : 00000

INDEXES EXPECTED : 000000000030          GLOBAL INDEXES EXPECTED : 000000000600
SELECTED  : 000000000030          GLOBAL INDEXES SELECTED  : 000000000600
IGNORED   : 000000000020          GLOBAL INDEXES DELETED   : 000000000000
INSERTED  : 000000000010          GLOBAL INDEXES INSERTED  : 000000000610
...

```

The values in the left column refer to the index(es) to be inserted:

- Expected** According to the database, the program expects 30 index values in the indexes to be inserted (in the example, these originate from one index generation).
- Selected** The program finds 30 index values (must be identical to the expected value).
- Ignored** The index contains values which are present several times over. 20 index values can be ignored, as index values which are present several times over are only saved once per list.
- Inserted** 10 index values are inserted into the global index.

The values in the right column refer to the respective global index before and after the update:

- Expected** According to the database, the program expects 600 index values in this unit of the global index database.
- Selected** The program finds 600 index values (must be identical to the expected value).
- Deleted** Number of index values, which are removed from the global index (see example for Remove).
- Inserted** The updated unit contains 610 index values after the update.

Example for Delete

```

...
START : 01.04.2008  END : 30.06.2008      / (IGL) INSERT : 00000
                                           DELETE : 00001

INDEXES EXPECTED : 000000000000          GLOBAL INDEXES EXPECTED : 000000005800
SELECTED   : 000000000000          GLOBAL INDEXES SELECTED   : 000000005800
IGNORED    : 000000000000          GLOBAL INDEXES DELETED    : 000000000010
INSERTED   : 000000000000          GLOBAL INDEXES INSERTED   : 000000005790
...

```

The values in the left column refer to the index(s) to be inserted; in this case all values are 0 (Insert = 0).

The values in the right column refer to the respective global index before and after the update:

- Expected** According to the database, the program expects 5800 index values in this global index.
- Selected** The program finds 5800 index values (must be identical to the expected value).
- Deleted** The program removes 10 index values from this global index.
- Inserted** The global index contains 5790 index values after the update.

Note

With other retention periods, it can of course happen that index values are being inserted and index entries are being removed at the same time.

B97MRLD: Mass reload batch utility

Overview

The mass reload batch utility (B97MRLD) reloads all lists that have been archived in the specified archive datasets into the Adabas Audit Data Retrieval online spool. All indexes of these lists are reloaded to the Adabas Audit Data Retrieval index spool. Lists and indexes that are not offline will not be reloaded.

Note on B97BRLD: If you want to create a large number of reload requests, use the batch utility B97BRLD instead (see page 236).

Online retention period after reloading

The retention period of lists and indexes that are reloaded with the mass reload batch utility (B97MRLD) is set as follows:

- If the parameter UPDRETPD=NO is specified in DD SYSIN, then the online retention period of lists and indexes is set according to the values of the two LST parameters B97_CLEANUP_RELOAD_LIST=*n* and B97_CLEANUP_RELOAD_INDEX=*n* (or, if not present, it is set to the default value 5 days). This is the default.
- If the parameter UPDRETPD=YES is specified in DD SYSIN, then the online retention period of each list and its indexes is set according to the original archive retention period of the list.
- If the parameter ONLEXPDT=ARCEXPDT is specified in DD SYSIN, then the flag **OnlExpdt = ArcExpdt** is set for reloaded lists, which means that the lists and their indexes remain available online until their archive expiration date is reached.

Note: The parameters ONLEXPDT=ARCEXPDT and UPDRETPD=YES affect also lists that are not reloaded because they are already online in the Adabas Audit Data Retrieval spool. Please note that UPDRETPD=YES may lead to different expiration dates because the online expiration date and the archive expiration date are calculated according to different algorithms:

- The online expiration date is calculated on the basis of the list date, whereas the archive expiration date is calculated on the basis of the archive run.
- The online expiration date is calculated on the basis of the number of work days per week, whereas the archive expiration date is calculated on the basis of the number of calendar days.

JCL

```

+-----+
|jobcard
|//B97MRLD EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97MRLD',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//SFFPARAM DD DISP=SHR,DSN=BETA.PARMLIB
|//B97DEF DD DISP=SHR,DSN=BETA97.DB.DEF
|//*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//SYSPRINT DD DUMMY
|//IRMPRINT DD SYSOUT=*
|//IRMLIST DD SYSOUT=*
|//IRMLLOG DD SYSOUT=*
|//IRMERROR DD SYSOUT=*
|//SYSIN DD *
|ANALYZE NO
|UPDRETPD NO
|MAXLIST 1000
|DSNAME datasetname
|DSNAME datasetname
|DSNAME datasetname
|/*
+-----+

```

Return codes

- 0** The program terminated normally.
- 4** The program did not find any data to be reloaded;
the program terminated normally.
- >4** One or several errors occurred during processing.
Please check the job log for details.

Some return codes are program-specific. Others are standard return codes which can also be modified. More information on standard return codes can be found in "Return codes" on page 224.

SYSIN parameters

You must specify at least one archive dataset in DD SYSIN. All other SYSIN parameters are optional.

Parameter	Description
ANALYZE YES NO	<p>NO The program reloads the lists and indexes from the specified archive datasets and logs these activities (default).</p> <p>YES The program runs in analyze mode; all logs are written, but no data is actually reloaded.</p>
DATASET = name DSNAME = <i>name</i> DSN = <i>name</i>	Use these keywords to specify the datasets from which lists and indexes are to be reloaded (lists and indexes that are already online will be ignored)
MAXLIST = <i>n</i>	<p>Maximum number of lists that are to be reloaded (with the pertaining indexes)</p> <p>If this parameter is specified after a dataset, then the limit applies only to this dataset. If the parameter is specified before the datasets, then the limit applies to the entire job.</p>
UPDRETPD = YES NO	<p>Determines the online retention period of reloaded lists and indexes</p> <p>NO The two LST parameters B97_CLEANUP_RELOAD_INDEX and B97_CLEANUP_RELOAD_LIST determine the online retention period of lists and indexes (default: 5 days)</p> <p>YES The remaining retention period in the archive determines the online retention period of each list and its indexes</p> <p>Note: UPDRETPD=YES affects also lists and indexes that are not reloaded because they are already online in the Adabas Audit Data Retrieval spool.</p>
ONLEXPDT = ARCEXPDT	<p>Causes the flag OnlExpdt = ArcExpdt to be set for reloaded list, which means that the lists and their indexes remain available online until their archive expiration date is reached.</p> <p>Note: ONLEXPDT=ARCEXPDT affects also lists and indexes that are not reloaded because they are already online in the Adabas Audit Data Retrieval spool.</p>

IRMLOG

DD IRMLOG contains the SYSIN parameters and an overview of the selected archive datasets (including the number of lists and indexes contained in these datasets).

```

+-----+
| IRM1561I PROGRAM: B97MRLD  VERSION: V7R2M00  PTFLVL: ptfLvl  COMPILED: date, time
| IRM2840I B97MRLD  MASS  RELOAD UTILITY STARTED - DATE: date, TIME: time
| IRM2210I *****
| IRM1901D  ANALYZE  NO
| IRM1901D  UPDRETPD NO
| IRM1901D  MAXLIST 100
| IRM1901D  DSN BETA97.TAPE365.VTS.E04148.C001
| IRM1901D  DSN BETA97.TAPE365.VTS.E04149.C001
| IRM1901D  DSN BETA97.TAPE365.VTS.E04149.C002
| IRM1901D  DSN BETA97.TAPE365.VTS.E04149.C003
| IRM1901D  DSN BETA97.TAPE365.VTS.E04149.C004
| IRM1901D  DSN BETA97.TAPE365.VTS.E04149.C005
| IRM1901D  DSN BETA97.TAPE365.VTS.E04149.C006
| IRM1901D  DSN BETA97.TAPE365.VTS.E04149.C007
| IRM1901D  DSN BETA97.TAPE365.VTS.E04149.C008
| IRM2210I -----
| IRM2210I For BETA97.TAPE365.VTS.E04148.C001 a total of 1 lists have been selected
| IRM2210I For BETA97.TAPE365.VTS.E04148.C001 a total of 6 indices have been selected
| IRM2210I -----
| IRM2210I For BETA97.TAPE365.VTS.E04149.C001 a total of 3 lists have been selected
| IRM2210I For BETA97.TAPE365.VTS.E04149.C001 a total of 23 indices have been selected
| IRM2210I -----
| ...
| IRM2210I -----
| IRM2210I Total Number of 56 lists selected and a total of 56 reloaded
| IRM2210I Total Number of 329 indices selected and a total of 329 reloaded
| IRM2210I *****
| IRM2840I B97MRLD  MASS  RELOAD UTILITY ENDED  - DATE: date, TIME: time
+-----+

```

IRMPRINT

DD IRMPRINT itemizes the lists and indexes of each archive dataset. The selection is logged first and then the reloading. The log contains the following:

- FORM / EXTENSION: Form and extension of the list
- DATE / TIME: Creation date and time of the list
- Index: Index name
- OnlRetpd: Online retention period of the reloaded list
- IdxRetpd: Online retention period of the reloaded indexes
- ArcRetpd: Archive retention period
- Status: Possible values can be found in the table below
- Reason / RC: Reason and return code (RC) if a list was not selected or reloaded

```

+-----+
|Date: date   Product: Beta 97                MASS RELOAD UTILITY
|Time: time   Version: V7R2
|
|Archive Dataset:  BETA97.TAPE365.VTS.E04149.C001
|
|Form  Extension  Date      Time      Index          OnlRetpd  IdxRetpd  ArcRetpd  Status  Reason  RC
|-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|BETA  ACCOUNTING  05/27/2004 13:42:24          0010      00010    00365    SELECTED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 $$$BETAINTERN$$$ 0010      00010    00365    SELECTED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 AMOUNT          0010      00010    00365    SELECTED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 POSTINGDATE     0010      00010    00365    SELECTED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 BRANCH          0010      00010    00365    SELECTED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 ACCOUNTNUMBER   0010      00010    00365    SELECTED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 CUSTOMERNUMBER  0010      00010    00365    SKIPPED  ONLINE  00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 MONTH          0010      00010    00365    SELECTED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 SUM            0010      00010    00365    SELECTED          00000
|...
|BETA  ACCOUNTING  05/27/2004 13:42:24 $$$BETAINTERN$$$ 0010      00010    00365    RELOADED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 AMOUNT          0010      00010    00365    RELOADED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 POSTINGDATE     0010      00010    00365    RELOADED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 BRANCH          0010      00010    00365    RELOADED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 ACCOUNTNUMBER   0010      00010    00365    RELOADED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 MONTH          0010      00010    00365    RELOADED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 SUM            0010      00010    00365    RELOADED          00000
|BETA  ACCOUNTING  05/27/2004 13:42:24 SUM            0010      00010    00365    RELOADED          00000
|...
+-----+
    
```

Status, reason, and return code

The following values can occur in the **Status** column of DD IRMPRINT:

Status	Reason	RC	Description
SELECTED	--	0	The list or index was selected for reloading.
NOT REL	ERROR	Infocode from OBJ server	The list or index could not be reloaded.
RELOADED	--	0	The list or index was reloaded.
REL-IDX	INV-PTR	20	The OBJ server returned an invalid index pointer.
REL-OBJ	INV-PTR	20	The OBJ server returned an invalid list pointer.
UPDIAR-R	ERROR	Infocode from OBJ server	The index maintenance records could not be modified.
UPDIGR-R	ERROR	Infocode from OBJ server	The list generation record could not be modified.
UPDATED	RETPD	Infocode from OBJ server	The list is online (Adabas Audit Data Retrieval spool); it is therefore not reloaded. The list and its indexes were updated because UPDRETPD=YES or ONLEXPDT=ARCEXPDT has been specified (update ended with RC=rc).
SKIPPED	ONLB97	0	The list is online (Adabas Audit Data Retrieval spool); it is therefore not reloaded.
SKIPPED	ONLINE	0	The index is online; it is therefore not reloaded.

For more information on the error codes returned by the object server, see "Database codes" in *BSA Messages and Codes*.

B97RLD: Reload batch utility

Overview

The reload batch utility (B97RLD) processes all existing reload requests. It reloads archived lists that have been marked for reload from the archive into the Adabas Audit Data Retrieval online spool. All indexes of these lists are reloaded into the Adabas Audit Data Retrieval index spool.

Online retention period after reloading

By default, reloaded lists and indexes remain in the Adabas Audit Data Retrieval online spool and index spool respectively for 5 days.

You can change this retention period by using these LST parameters:

- `B97_CLEANUP_RELOAD_LIST=n`
where *n* is the retention period of reloaded lists in days
- `B97_CLEANUP_RELOAD_INDEX=n`
where *n* is the retention period of reloaded indexes in days

The retention period of reloaded indexes should not be shorter than the retention period of reloaded lists.

Running B97RLD

You should run this utility at regular intervals during the day to ensure that the lists that users have marked for reloading are actually reloaded from the archive.

Tailored JCL for this job can be found in member B97RLD in the BETA97.CNTL.

You can also submit this batch utility online via option **S.3.2**. This will generate JCL from member SE97RELO of the BETA97.ISPSLIB (skeleton library).

Reload order

If a list and its indexes are available on several archive media, the archive medium used is determined by the value in the **Order for Reload** field of the archive pool definition. If reloading from one archive medium fails, other media are used according to their reload order.

By default, the **Order for Reload** field has the value **ASIS** (as is), which means that the reload batch utility uses archive media in the order specified in the archive subpool definitions.

For more information, see "Example: Overriding default order for reload" on page 150.

JCL

```

+-----+
|jobcard
|//B97RLD EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=B97RLD',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//B97DEF  DD DISP=SHR,DSN=BETA97.DB.DEF
|//*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//SYSPRINT DD DUMMY
|//IRMPRINT DD SYSOUT=*
|//IRMLIST  DD SYSOUT=*
|//IRMLLOG  DD SYSOUT=*
|//IRMERROR DD SYSOUT=*
|//*
+-----+
    
```

Return codes

- 0** The program terminated normally.
- 4** The program did not find any data to be reloaded; the program terminated normally.
- >4** One or several errors occurred during processing. Please check the job log for details.

Some return codes are program-specific. Others are standard return codes which can also be modified. More information on standard return codes can be found in "Return codes" on page 224.

IRMPRINT

DD IRMPRINT contains a summary log displaying the lists, which were reloaded successfully, as well as the reload requests which could not be carried out. It contains the following information:

- DATE / TIME: Creation date and time of the list/report
- FORM / EXTENSION / REPORT: Name of the list
- PAGES: Number of pages
- Status: OK or error code

For more information on the error codes returned by the OBJ server, see "Database codes" in *BSA Messages and Codes*.

```

+-----+
|Date: 18.03.2020 Product: Beta 97          RELOAD UTILITY          Page: 1
|Time: 15:48:52  Version: V7R2
+-----+
|Date      Time      Form      Extension      Report      Pages      Status
+-----+
|10.03.2020 14:12:46 REJ      TRADE          00000015 OK
|10.03.2020 14:19:48 REJ      TRADE          00000015 OK
|10.03.2020 14:22:49 REJ      INVENTORY     00000009 OK
|11.03.2020 16:28:34 REJ      TRADE          00000015 OK
+-----+
    
```

IRMLOG

A processing log is written to DD IRMLOG.

```

+-----+
|IRM1561I PROGRAM: B97RLD   VERSION: V7R2M00  PTFVLV: Level   COMPILED: date, time
|IRM2800I RELOAD  PROCESSING STARTED - DATE: 18.03.2020, TIME: 15:48:52
|IRM1801I *****
|IRM1801I 000004 RELOAD REQUEST(S) SELECTED
|IRM1801I 000004 RELOAD REQUEST(S) SUCCESSFULLY PROCESSED
|IRM1801I *****
|IRM2899I RELOAD  PROCESSING ENDED   - DATE: 18.03.2020, TIME: 15:48:52, RC: 0000
+-----+
    
```

Automatic reloading

Automatic reloading means that the Adabas Audit Data Retrieval started task checks the number of reload requests that are waiting in the reload queue. If the specified limit has been exceeded, the STC calls a procedure, which in turn submits a reload job in order to process the reload requests with status WAITING.

Automatic reloading is controlled via the following LST parameters:

Parameter name	Value	Description	Default
B97_AUTORLD_ENABLED	YES NO	Activates or deactivates automatic reloading	NO
B97_AUTORLD_INTERVAL	1..1440	Reload check interval in minutes At the specified interval, the STC checks the reload queue for waiting reload requests. The STC starts the autoreload procedure if at least one of the following is true: <ul style="list-style-type: none"> The number of reload requests with status WAITING exceeds the B97_AUTORLD_REQUEST_LIMIT_LOW value. The number of reload check repeats has reached the B97_AUTORLD_SETTLE_COUNT value. 	60
B97_AUTORLD_REQUEST_LIMIT_LOW	1..99	At reload check, the STC starts the autoreload procedure if the number of reload requests with status WAITING exceeds the specified low limit.	10

<p>B97_AUTORLD_SETTLE_COUNT</p>	<p>0..99</p>	<p>At reload check, the STC starts the autoreload procedure if the number of reload check repeats has reached the specified value. The STC starts counting the reload check repeats when reload requests with status WAITING are present, but their number is less or equal to the low limit.</p> <p>You can use this parameter to limit the maximum waiting time of reload requests in the reload queue.</p> <p>The value 0 disables this function.</p>	<p>1</p>
<p>B97_AUTORLD_PROCEDURE</p>	<p>name</p>	<p>Name of the RFF procedure that starts the reload job (required if B97_AUTORLD_ENABLED=YES)</p> <p>The procedure (default name: B97RLDA) is tailored during installation and then copied to the specified procedure library. Automatic reloading is deactivated if no name is specified.</p> <p>Required: APF authorization</p> <p>The steplibs of the reload procedure must be APF-authorized to enable the initialization of the new address space.</p> <p>Instead of using a reload procedure, the STC can submit the reload jobs directly in its own address space. If you want this, code:</p> <p>B97_AUTORLD_PROCEDURE = ##NONE##</p>	<p><i>none</i></p>

Example

The following LST parameters are active:

```
B97_AUTORLD_ENABLED =          YES
B97_AUTORLD_INTERVAL =         5
B97_AUTORLD_REQUEST_LIMIT_LOW = 3
B97_AUTORLD_SETTLE_COUNT =      1
B97_AUTORLD_PROCEDURE =        B97RLDA
```

The STC checks the reload queue at five-minute intervals. The activity of the STC depends on the number of reload requests at this moment:

- 0** There is no autoreload activity until the next reload check.
- >3** The STC starts the autoreload procedure because of the low limit value.
- <=3** The STC increases the reload check repeat counter by 1. At the next reload check, the STC will start B97RLDA because the reload check repeat counter has reached the B97_AUTORLD_SETTLE_COUNT value.

This means that the maximum waiting time of a new reload request is 10 minutes.

BST08OCP: Archive copy batch utility

Overview

The BSA utility BST08OCP supports a different range of features depending on the Beta Systems product archive. The following tasks are supported for a Adabas Audit Data Retrieval archive:

- Checking the contents of archive datasets (CHECK command)
- Creating copies of archive datasets (COPY command)
- Updating the database tables (AOR, IGR, IAR) according to the contents of the archive datasets (REPAIR command)
- Reloading the lists and indexes contained in the archive datasets (RESTORE command)

License check

No license is necessary for the CHECK function. For all the other functions, the program verifies that the required license is present before it executes the specified function.

JCL

```

+-----+
|jobcard
|//BST08OCP EXEC PGM=BST01RFF,REGION=0M,PARM=('S=97',
|//          'PGM=BST08OCP',
|//          'B01LST=xx',
|//          'B97LST=xx',
|//          'SIGNON=YES')
|//*
|//STEPLIB DD DISP=SHR,DSN=BETA97.LOAD
|//          DD DISP=SHR,DSN=BSA.LOAD
|//*
|//SFFPARM DD DISP=SHR,DSN=BETA.PARMLIB
|//B97DEF DD DISP=SHR,DSN=BETA97.DB.DEF
|//*
|//IRMPRINT DD SYSOUT=*
|//IRMLOG DD SYSOUT=*
|//IRMERR DD SYSOUT=*
|//IRMDEL DD SYSOUT=*
|//IRMIN DD *
| control statements
|/*
|//SYSPRINT DD SYSOUT=*
|//SFFFDUMP DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
+-----+

```

- Return codes**
- 0** The program terminated normally.
 - 4** The program terminated with warnings, which can be caused by, for example:
 - No data was found to process.
 - 8** Inconsistencies were found for at least one list.
 - 16** This return code can occur due to several reasons:
 - An invalid keyword was coded.
 - A required DD statement was not coded.
 - The program was unable to find a matching record (AGR) for the dataset specified. (It is possible that the dataset has already expired or that the specified dataset name is wrong.)

DD names

DD name	Description
IRMPRINT	Used to log the program start, the command executed, and the result
IRMPROT	Contents of the archive datasets analyzed This DD statement is required when using the CHECK command. It is optional for all other commands. Don't code this DD statement if you don't need this information.
IRMLOG	Used to log the control statements coded in DD IRMIN and to output messages
IRMERR	Contains lists where errors have been found (these lists are also logged in IRMPROT)
IRMDEL	List of datasets that are to be deleted; you can use DD IRMDEL as input for IDCAMS to delete these datasets Is written when AGRs are deleted, e.g. when COPY uses a target subpool that already has datasets of the same archive run (same ATOKEN).
IRMIN	Control statements (see below under the descriptions of the functions CHECK, REPAIR, COPY, and RESTORE)

Instead of DD names with the prefix **IRM**, you can also use DD names with the prefix **BST** or **BSS**, i.e. BSTPRINT/BSSPRINT, BSTPROT/BSSPROT, etc.

Syntax for IRMIN

Keywords are separated by one or more blanks.

Specify a hyphen (-) at the end of the line if the statement continues on the next line.

Specify an asterisk (*) at the beginning of the line for comments.

CHECK function

CHECK analyzes the contents of the archive datasets that were created for an archive subpool during an archive run. The program checks which lists are contained in these datasets and the number of their indexes. It compares the number of pages at read-in and number of pages in the archive. The contents of the archive datasets are listed in DD IRMPROT.

The CHECK command supports the following subcommands:

DSNAME(<i>dsname</i>)	Name of any archive dataset that was created during the corresponding archive run
ORDER(<i>n</i>)	Order number of this dataset (reload order at the time of archival)

Example

```
CHECK DSNAME(B97.DISK01.E06032.C001) ORDER(1)
```

Notes

DSNAME(*dsname*) and ORDER(*n*) must be specified.
DD IRMPROT must be present.

Archive dataset selection

The program analyses all archive datasets of one subpool that were created during one archive run. ORDER(*n*) specifies the subpool. DSNAME specifies the name of one archive dataset. The program determines the other archive datasets of this archive run and their correct order on the basis of the Adabas Audit Data Retrieval database.

Background knowledge on database structure

Adabas Audit Data Retrieval administers archive datasets in the AGR table. The records of this table are displayed under option **A.2**.

The records of all archive datasets of one archive run share the same unique identifier (ATOKEN) in the database. The order number (reload order) specified in the archive subpool definition is stored in the AGRORDER field of this record. With the help of the values in the ATOKEN and AGRORDER fields, the program can identify all archive datasets that were created for one archive subpool during one archive run.

The program BST08OCP first identifies all datasets that belong to the same archive run and archive subpool as the archive dataset and order number specified as parameters (same values in the fields ATOKEN and AGRORDER). Subsequently, the program carries out the command.

REPAIR function

REPAIR carries out a check of the selected archive datasets (see CHECK) and creates or updates the corresponding data records in the specified database tables.

The REPAIR command supports the following subcommands:

DSNAME(<i>dsname</i>)	See CHECK
ORDER(<i>n</i>)	See CHECK
RECORD(AOR, IGR, IAR)	The corresponding records in the specified database tables are inserted or updated: <ul style="list-style-type: none"> AOR All data records with the identified ATOKEN plus AGRORDER are deleted and then new entries for the contents of the archive datasets are created. IGR A new IGR is inserted for each list in the processed archive dataset, which references this archive dataset. If an IGR is already present for a list, this record is preserved. IAR A new IAR is inserted for each index in the processed archive dataset, which references this archive dataset. If an IAR is already present for an index, this record is preserved.

Notes

DSNAME(*dsname*), ORDER(*n*) and RECORD(*records*) must be specified.

Example

```
REPAIR DSNAME(B97.DISK01.E06032.C001) ORDER(1) -
      RECORD(AOR, IGR, IAR)
```

COPY function

COPY creates copies of the selected archive datasets (see CHECK). The source is specified using the subcommand FROM ORDER. You can specify one or more subpools as target using the subcommand TO ORDER. The program can copy archived datasets only within the same archive pool.

Archive subpool definitions must be present for the specified order numbers. You can create a new definition for the archive dataset copies or you can specify an archive subpool definition that already has archive datasets.

Archive datasets are not copied on a dataset-per-dataset basis. Instead, the number and size of the datasets created as copies depends on the target archive subpool definition. The last qualifier of an archive dataset copy is K001, K002, ..., K nnn . (**K** is the default. Code CHAR(x) if you want to use the specified character x instead.)

Important: When you copy archive datasets into a target archive subpool that already has archive datasets from the same archive run, the program deletes the corresponding database records from the database first before creating the archive dataset copies. The names of the datasets whose records are deleted are listed in DD IRMDEL. DD IRMDEL can be used as input of IDCAMS in order to delete these datasets.

The COPY command supports the following subcommands:

DSNAME(<i>dsname</i>)	See CHECK
FROM ORDER(<i>n</i>)	See CHECK, ORDER(<i>n</i>)
TO ORDER(<i>n</i>)	The archive dataset copies are assigned to this archive subpool. You can also specify more than one order number. Values are separated by commas.
CHAR(<i>x</i>)	K is the default for final qualifier Knnn of archive dataset copies. Code CHAR(x) if you want to use the specified character x instead. If you copy to more than one target subpool (TO ORDER(n,n,n)), you can specify different characters for each copy (CHAR(x,x,x)).
EXPDT(<i>date</i>)	Determines the expiration date of the archive dataset copy. If EXPDT(<i>date</i>) is not coded, the archive dataset copies inherit the expiration date from the source datasets.
NOEXPIRED	The program does not copy lists whose archive expiration date has already been reached.
WHERE(<i>bqlstatement</i>)	The program copies only lists whose attributes match the specified WHERE condition. The WHERE condition refers to fields of the IGR and has to be specified using standard BQL syntax. (The use of WHERE automatically excludes expired lists because their IGRs are deleted after expiration.)
OUTSIDE	Specify OUTSIDE if you want to create archive dataset copies for an external location. In this case, the program does not create any records for archive administration in the current database (AORs and AGRs). The status of the AGRs of the source datasets is set to BAD.

Notes

DSNAME(*dsname*), FROM ORDER(*n*) and TO ORDER(*n*) must be specified. The other subcommands are optional.

Example

```
COPY DSNAME(B97.DISK01.E06032.C001) FROM ORDER(1) -  
      TO ORDER(95,96) EXPDT(31.12.2019)  
  
COPY DSNAME(B97.DISK01.E06032.C001) FROM ORDER(1) -  
      TO ORDER(4) OUTSIDE -  
      WHERE(B97DATE EQ 20.03.2009 AND -  
            B97TIME EQ 12:39:16:07)
```

Moving archived lists with OUTSIDE

The COPY function can be used to move certain lists from an existing archive to other locations. In the following example, all lists whose extension begins with **B31** are to be moved.

A first run creates archive dataset copies in a new subpool for the lists that are to remain in the data center. These copies contain all lists that are not to be moved. The program creates database records for archive administration (AORs and AGRs) and marks the AGRs of the source datasets as BAD.

```
COPY DSNAME(dsname) FROM ORDER(1) TO ORDER(3) -  
      WHERE(EXT UNLIKE B31*)
```

A second run creates the archive dataset copies for the lists that are to be moved.

```
COPY DSNAME(dsname) FROM ORDER(1) TO ORDER(4) -  
      OUTSIDE WHERE(EXT LIKE B31*)
```

RESTORE function

RESTORE reloads lists and their indexes from the selected archive datasets (see CHECK).

- Lists are reloaded in the spool files of the type SPOOL; the corresponding data records of the type IGR are updated accordingly.
- Indexes are reloaded in the spool files of the type INDEX; the corresponding data records of the type IAR are updated accordingly.

Only offline lists/indexes are reloaded (spool pointer and index pointer are zero). Lists must also be viewable (IGRVIEW = Yes).

Optionally, you can limit the selection of lists with a help of a WHERE condition.

The RESTORE command supports the following subcommands:

DSNAME(<i>dsname</i>)	See CHECK
ORDER(<i>n</i>)	See CHECK
RETPD	By default, the archive retention period for the reloaded lists and indexes is taken over as online retention period on a one-to-one basis. Enter the parameter RETPD, if the difference between list date (B97DATE) and date of the archive run should be added to the new online retention period. Example: A list was read in on July 1, 2010, and archived on July 15, 2010, with a retention period of 365 days. With RETPD: It expires on July 15, 2011. Without RETPD: It expires on July 1, 2011.
WHERE(<i>bqlstatement</i>)	WHERE condition to limit the selection of lists for reloading (optional) The WHERE condition refers to fields of the IGR and has to be specified using standard BQL syntax. (The use of WHERE automatically excludes expired lists because their IGRs are deleted after expiration.)

Notes

DSNAME(*dsname*) and ORDER(*n*) must be specified. The other subcommands are optional.

Example

```
RESTORE DSNAME(B97.DISK01.E06032.C001) ORDER(1) -
WHERE(ETOKEN EQ C1D4B3E8C50B31C0)
```

Example of IRMPROT

The contents of the analyzed datasets are listed in DD IRMPROT. The following information is printed for each archived list:

- Form and extension
- Jobname and JESID of the job that created this list
- List date and time
- ETOKEN
- Number of pages (according to database)
- Number of pages actually archived in the archive dataset (FOUND)
- Number of indexes of this list (IDXCNT)
- Return code (normally none; return code 8 indicates inconsistencies)

FORM	EXT	REPORT	JOBNAME	JESID	DATE	TIME	ETOKEN	PAGES	FOUND	IDXCNT	RC
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:00:24:98	BC4294DFD911ED00	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:00:28:30	BC4294E303A7CA60	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:00:31:59	BC4294E627065180	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:00:34:81	BC4294E938F5BE00	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:00:38:13	BC4294EC63892380	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:00:41:42	BC4294EF86CBA0C0	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:00:44:62	BC4294F293F2DEE0	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:00:47:83	BC4294F5A4074F60	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:00:51:15	BC4294F8CE4A0900	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:00:54:42	BC4294FBEC9B1E60	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:00:57:64	BC4294FEFEB8C200	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:01:00:97	BC4295022C14E660	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:01:04:18	BC4295053B52E4E0	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:01:07:50	BC42950865DC4F00	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:01:10:73	BC42950B7A7D5F60	00000003	00000003	00002	
ARCH	TAPE101		QIARC001	J0005679	13.12.2004	06:01:13:95	BC42950E8C9D92A0	00000003	00000003	00002	
LISTS FOUND : 0000016 WITH RC : 000											

Example: Using `_beta` report to create IRMIN

It is possible to use `_beta` report to generate the corresponding control statements for DD IRMIN. The following example shows how to create control statements for the copying of tape archive datasets. The statement `IF TOKEN NE ATOKEN` ensures that only one archive dataset is output for each archive run.

```

+-----+
|//BSTREPCP JOB CLASS=A,MSGCLASS=P,NOTIFY=&SYSUID
|//*
|//REPORT EXEC PGM=BST16RPG,REGION=0M
|//STEPLIB DD DISP=SHR,DSN=BSA.LOAD
|//RPGPARM DD *
| SSID=ssid
| TRACE=NO
| DEBUG=NO
| DATEMASK=DD/MM/YYYY
| NUMBER=INTERNATIONAL
|//*
|//RPGPUNCH DD DSN=dsname,DISP=(,CATLG),
|// SPACE=(CYL,(5,5),RLSE),
|// DCB=(RECFM=FB,LRECL=80,BLKSIZE=3200)
|//RPGPRINT DD SYSOUT=*
|//RPGSCAN DD SYSOUT=*
|//RPGTRACE DD SYSOUT=*
|//RPGSUM DD SYSOUT=*
|//RPGWORK DD DSN=&&TEMP2,DISP=(,PASS),SPACE=(CYL,(5,5))
|//SORTOUT DD DSN=&&TEMP3,DISP=(,PASS),SPACE=(CYL,(5,5))
|//SORTWK01 DD UNIT=SYSDA,SPACE=(CYL,(10,5))
|//SORTWK02 DD UNIT=SYSDA,SPACE=(CYL,(10,5))
|//SORTWK03 DD UNIT=SYSDA,SPACE=(CYL,(10,5))
|//SYSOUT DD SYSOUT=*
|//SYSABEND DD SYSOUT=*
|//RPGIN DD *
| DEFCHAR TOKEN LENGTH 16 VALUE '0000000000000000'
| DEFPCH PCH DDNAME 'RPGPUNCH'
| MOVE 0 TO $BQLRC
| WHILE $BQLRC EQ 0
| BQL_EXEC 'SELECT TABLE AGR FIELDS(*) -
| WHERE (AGRORDER = 1 AND ARCHMED = TAPE) -
| ORDER BY KEY AGRID00'
| IF $BQLRC EQ 0
| IF TOKEN NE ATOKEN
| MOVE ATOKEN TO TOKEN
| PUNCH ' COPY DSNAME(' &AGRDSN ') - ' TO PCH
| PUNCH ' FROM ORDER(' &AGRORDER ') TO ORDER(4) ' TO PCH
| ENDF
| ENDF
| ENDWHILE
| EXIT
|//*
+-----+

```

Service and database (Option D)

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Overview of the Database option

Introduction

Option D - DATABASE provides access to a series of panels that let you:

- Display the Adabas Audit Data Retrieval database and its current usage
- Define new spool files
- Explore the structure of the Adabas Audit Data Retrieval database (tables, fields, and keys)
- Query, update, or delete records
- Generate JCL for database utilities
- Call the BSA Service Manager

Service and Database Selection Menu

The "Service and Database Selection Menu" displays databases or updates spool datasets.

```

PEB5DA00 -----
Option ==> _____

Service and Database Selection Menu                                System - B97PROD
                                                                Location - BERLIN
                                                                Subsys-ID - B97P
                                                                User ID - B97ADM

 1 DATABASE - Display or Update System Database
 2 DICTIONARY - Display Dictionary Information
 3 STATISTICS - Statistics of Database Usage
 4 UTILITIES - Generate Batch Jobs for Database Maintenance
 Q QUERY - Database Query
 S SERVICE - Service Manager

Parameter for Option 1 and 2 :
  Display numeric values with leading zeros ==> YES (Y)es, (N)o

Select one of the above options. Press END to return to the previous menu.

```

Option 1 - DATABASE

Use this option to display information on the Adabas Audit Data Retrieval datasets and their current usage. For more information, see "Database display: How full is your database?" on page 323 and the *Adabas Audit Data Retrieval Installation and System Guide*.

Numeric values with/without leading zeros

Use **Display numeric values with leading zeros** at the bottom of the panel to control whether numeric values are displayed with leading zeros under this and the next option.

Option 2 - DICTIONARY Use this option to explore the database dictionary of the Adabas Audit Data Retrieval database. You can use this information on tables and fields when you want to:

- Analyze data using _beta report
- Upload data into the database using the batch utility B97BUTLT or download data from the database using the batch utility B97DLOAD

Option 3 - STATISTICS This option is not used under Adabas Audit Data Retrieval.

Option 4 - UTILITIES This option enables you to generate JCL for database maintenance tasks (enlarging, reducing, renaming, etc.).

Option Q - QUERY You can use the Database Query to view, update, or delete selected records in a Adabas Audit Data Retrieval table.

Warning: It is possible to corrupt the database by updating or deleting records. Do **not** update or delete records unless instructed to do so by support.

Option S - SERVICE You can use this option to call the BSA Service Manager.

Adabas Audit Data Retrieval tables Following is a list of database tables used by Adabas Audit Data Retrieval together with the corresponding online options. The database also contains other tables for internal use.

Table	Table long name	Online option
ADP	ARCHIVE DATASET POOL	Option A.1
ADS	ARCHIVE DATASET DEFINITION	Option A.1 , line command A
ADT	ARCHIVE DEVICE TABLE	Option A.4
AGR	B97 AGR	Option A.2
AVR	ARCHIVE VOLUME RECORD	Option A.3
DOG	DISPLAY ORDER GROUP ENTRY	Option 2.6 , line command L
DON	DISPLAY ORDER GROUP NAME	Option 2.6
FGN	FOLDER GROUP NAMES	Option 2.5
FGR	FOLDER GROUP RELATIONS	Option 2.5 , line command F
GLN	GROUP LIST REPORT NAME	Option 2.4
GLP	GLOBAL INDEX PROCESSING RULE	Option 2.4 , line command P
GLR	GROUP LIST REPORT	Option 2.4 , line command L
IAR	IAR ARGUMENT	Option 1 , line command IR
IDR	INDEX DESCRIPTION	Option 2.3

Table	Table long name	Online option
IDX	INDEX ARGUMENT	Option 2.1 , line command IX
IGL	INTERNAL GLOBAL INDEX	Option 3.1 and 3.2
IGR	INDEXED LIST GENERATION	Option 1 and I
LDR	LIST REPORT DEFINITION	Option 2.1
MAC	USER BROWSE MACRO	Option C.2
MSG	MESSAGE	Option M
NTE	USER BROWSE NOTE	Option 1 , Browser
RLD	RELOAD QUEUE TABLE	Option 3.3
RPG	RPG BATCH REPORT DEFINITION	Option S.4
RST	REMOTE SYSTEM TABLE	Option S.1
SAA	SEARCH ARGUMENT VALUE	Option 2.2 , line command A
SAS	SEARCH ARGUMENT ID	Option 2.2
SYS	SYSTEM	Option S.2
UGF	USER GENERATION PROFILE	Option C.U
VCI	USER TABLE	Option C.1

Database display: How full is your database?

Procedure

From the Primary Selection Menu, choose option D - DATABASE, then 2 - DICTIONARY, then 4 - DATABASE to display the System Database Display table. This panel displays the following information for each database:

- Dataset name
- Status (OPeN, EMPTy, FULL, MODel, readONLY, FORmat, ERRor, Format EXTend error)
- File ID
- Defined buffer size
- Percentage of used space
- Type (CAche, DAta, GLobal, IndeX, LOg, KEy, SPool, SYnc, NOT defined in Adabas Audit Data Retrieval database definition file)
- High water mark

System Database Display table

```

PEB5DI01 ----- Row 1 of 25
Command ==> _____ Scroll ==> PAGE

Display System Databases ( LEFT/RIGHT )

Data Set Name          X Stat FileID Buffer  %  Type HWM
BETA97.DB.ARC          OPN  01013 00000050 001 DA  90
BETA97.DB.ARC.KEY      OPN  01015 00000050 000 KE  90
BETA97.DB.CACHE1      OPN  01011 00000000 075 CA  --
BETA97.DB.CACHE2      MOD  01030 00000000 000 CA  --
BETA97.DB.DEF          OPN  00001 00000000 017 NO  --
BETA97.DB.GLOBL1      OPN  01023 00000000 009 GL  --
BETA97.DB.INDEX1      OPN  01005 00010000 075 IX  --
BETA97.DB.INDEX2      MOD  01007 00010000 000 IX  --
BETA97.DB.LIST        OPN  01008 00000100 009 DA  90
BETA97.DB.LIST.KEY    OPN  01006 00000100 005 KE  90
BETA97.DB.LOG          OPN  01001 00000000 034 LO  --
BETA97.DB.MAIN        OPN  01002 00000010 034 DA  90
BETA97.DB.MAIN.KEY    OPN  01004 00000010 035 KE  90
BETA97.DB.MSG          OPN  01017 00000100 004 DA  90
BETA97.DB.MSG.KEY    OPN  01018 00000100 004 KE  90
BETA97.DB.NOTES       OPN  01020 00000010 001 DA  90
BETA97.DB.NOTES.KEY  OPN  01019 00000010 000 KE  90
BETA97.DB.SFR         OPN  01026 00000100 000 DA  90
    
```

System Database Display table (detailed view PF10/PF11)

```

PEB5DI01 ----- Row 1 of 25
Command ==> _____ Scroll ==> PAGE

Display System Databases ( LEFT/RIGHT )

Dataset Name          X Sta FileID Buffer  % Type HWM
BETA97.DB.ARC        OPN  01013 00000050 001 DA  90
VolSer: SBSA01 Unit: 3390 Space: 000060 Cyl  CIsiz: 04096 ShortName: ARCDATA
-----
BETA97.DB.ARC.KEY    OPN  01015 00000050 000 KE  90
VolSer: SBSA01 Unit: 3390 Space: 000025 Cyl  CIsiz: 04096 ShortName: ARCKEY
-----
BETA97.DB.CACHE1     OPN  01011 00000000 075 CA  --
VolSer: SBSA01 Unit: 3390 Space: 000100 Cyl  CIsiz: 04096 ShortName: CACHE1
-----
BETA97.DB.CACHE2     MOD  01030 00000000 000 CA  --
VolSer: SBSA01 Unit:      Space: 000100 Cyl  CIsiz: 04096 ShortName: CA001030
-----
BETA97.DB.DEF        OPN  00001 00000000 017 NO  --
VolSer:      Unit:      Space:      Cyl  CIsiz: 04096 ShortName: B97DEF
-----
BETA97.DB.GLOBL1     OPN  01023 00000000 009 GL  --
VolSer: SMS  Unit:      Space: 000200 Cyl  CIsiz: 04096 ShortName: SP001023
-----
    
```

Enlarging databases

If one of the Adabas Audit Data Retrieval databases is getting full, you may have to enlarge it. You can generate JCL for this online under option **D.4** or use the tailored JCL in BETA97.CNTL(B97DBENL). This utility backs up the existing database and creates a larger database using IDCAMS. For more information, see the *Adabas Audit Data Retrieval Installation and System Guide*.

Database display: Displaying definitions

Procedure

To display all Adabas Audit Data Retrieval databases:

- From the "Primary Selection Menu", choose option **D.1**
The "Data Set Definition Selection" table is displayed.

Dataset Definition Selection table

```

PEB5DD10 ----- Row 1 of 25
Command ==> _____ Scroll ==> PAGE

Dataset Definition Selection Page 1 of 3
( LEFT/RIGHT )
Databases for Subsystem SSID B92P SYSVAR Support : INACTIVE

I - Insert Model F - Format Model
S - Select Dataset Definition or D - Delete Model or Empty
Update Model or Status R - Reset Model (ERR)
X - Database Extension RX - Reset Database Extension (FEX)

Sel Dataset Name X Total Free % Sta
BETA97.DB.ARC 00010800 00010649 001 OPN
BETA97.DB.ARC.KEY 00004500 00004482 000 OPN
BETA97.DB.CACHE1 00018000 00004500 075 OPN
BETA97.DB.CACHE2 00000000 00000000 000 MOD
BETA97.DB.DEF 00000900 00000739 017 OPN
BETA97.DB.GLOBL1 00036000 00032701 009 OPN
BETA97.DB.INDEX1 00018000 00004500 075 OPN
BETA97.DB.INDEX2 00000000 00000000 000 MOD
BETA97.DB.LIST 00003600 00003271 009 OPN
BETA97.DB.LIST.KEY 00003600 00003385 005 OPN
BETA97.DB.LOG 00000600 00000392 034 OPN
    
```

Table columns

Each entry displays the size and usage:

- Number of allocated 4K blocks (Total)
- Number of 4K blocks that are currently unused (Free)
- Percentage of 4K blocks that are currently used (%)
- Status (OPeN, EMpTy, FULl, MODeL, readONLY, FORmat, ERRor, Format EXTend error)

You can display these columns by scrolling to the right (PF11):

- Type (CAche, DAta, GLobal, IndeX, LOg, KEy, SPool, SYnc, NOT defined in Adabas Audit Data Retrieval database definition file)
- High water mark

Primary commands

SORT *columnname*[,A|D] Sorts the displayed table in ascending (A) or descending (D) order according to the specified column (For a list of column names, refer to the help panel.)

SORT Displays a help panel on the SORT command for this table

Display Data Set Information

Display Data Set Information

When you enter the line command **S** in front of an entry (except spool), the "Display Data Set Definition" panel is displayed.

```

PEB5DD21 ----- Page 1 of 3
Command ==> _____

Display Data Set Information

Product           : B97                SYSVAR Support : INACTIVE
Data Set Name     : BETA97.LIST

Database Information
Short Name        : B97LIST           File ID        : 01008
CI Size          : 04096
High Alloc RBA   : 0000036000
High Used RBA    : 0000036000

Cache Buffer      : 00000100

Type             : DA                I/O-Read      : 0000000134
Data Set Status  : OPN              I/O-Write     : 0000000034
High Water Mark  : 90 Percent       I/O-Requests  : 000003086
Warning Threshold : 00010 Cyl.      Caching       : 095 Percent
Allocated       : 010 Percent
    
```

Press DOWN to display the next page or END to return to the previous panel.

Fields

Field	Descriptions
Product	Always B97
Dataset Name	VSAM dataset name If a static system symbol has been replaced in the dataset name, both are displayed; the actual dataset name that is used (system variables have been replaced) and the dataset name that is stored in the database definition file (system variables have not been replaced).
Short Name	Short name of the VSAM dataset
File ID	File ID
Clsize	Specifies the size of the control interval (CI)
High Alloc RBA/ High Used RBA	Number of highest allocated relative byte address and of highest relative byte address in use
Cache Buffer	Number of 4K blocks used for caching

Field	Descriptions
Type	<p>The following values may be displayed:</p> <p>NO Database definition file</p> <p>DA Data file</p> <p>KE Key file</p> <p>SP Spool file of type spool</p> <p>IX Spool file of type index</p> <p>CA Spool file of type cache</p> <p>GL Spool file of type global index</p> <p>LO Log file</p> <p>SY Sync file</p>
Dataset Status	<p>The following values may be displayed:</p> <p>USE Dataset is in use</p> <p>CLS (Closed) Dataset could not be opened</p> <p>MOD (Model) Spool file in status model</p> <p>ONL (Read only) Dataset is read-only</p> <p>FMT (Format) Spool file is being formatted</p> <p>EMP (Empty) Dataset is empty</p> <p>ERR (Error) Dataset is in error</p> <p>FEX Format extend error</p> <p>FUL (Full) Dataset is full</p> <p>OPN (Open) Dataset is open</p>
High Water Mark	High water mark (in percent)
I/O-Read	Database read access count
I/O-Write	Database write access count
I/O-Req.	Total number of database requests (I/O-Read, I/O-Write, and Caching)
Caching	Percentage the database was not accessed directly but via Speed Master

Field	Descriptions
Warning threshold/ Allocated	<p>These two fields are displayed only if the optional MAXSIZE value has been defined for this database in the database definition file:</p> <p>Warning threshold is a user-defined value (in cylinders) which can be used to monitor the growth of dynamic databases when extends are formatted (messages IRM9549I and IRM9549W).</p> <p>Allocated displays the amount of allocated space (in percent) in relation to the warning threshold.</p>

The following information is displayed when you scroll down (PF8):

Field	Descriptions
VSAM Information fields	The name of the VSAM catalog, the name of the VSAM cluster, and the name of the VSAM cluster with the type DATA.
Space Information fields	The primary and secondary space requests in cylinders, the maximum length of data set records, the number of records per track, the totally allocated space in cylinders, the number of tracks per cylinder, and the number of extents in use are displayed.
SMS Information fields	SMS information on SMS management classes (MGMTCLAS), SMS storage classes (STORCLAS), and SMS data classes (DATACLAS) is displayed.
Volume Information fields	The number of defined volumes, the number of unused volumes (candidates), and the volser number (1 - 10) of the volume on which the data set is located are displayed.

Spool files

Overview

Adabas Audit Data Retrieval uses spool files to store lists and indexes. Adabas Audit Data Retrieval uses spool files of the following type:

- SPOOL
- RELOAD
- INDEX
- GLOBAL
- CACHE

Adabas Audit Data Retrieval requires at least one spool file of each type. When needed, additional spool files can be allocated manually or automatically.

Types of spool files

These are the four types of spool files used by Adabas Audit Data Retrieval:

1. Type SPOOL contains lists.

The Adabas Audit Data Retrieval online spool comprises one or several files of this type.

2. Type RELOAD contains reloaded lists.

The Adabas Audit Data Retrieval reload spool comprises one or several files of this type.

3. Type INDEX contains indexes.

The Adabas Audit Data Retrieval index spool comprises one or several files of this type.

4. Type GLOBAL contains global indexes.

The Adabas Audit Data Retrieval global index spool comprises one or several files of this type.

5. Type CACHE contains 4-MB objects of data of lists that have been reloaded automatically when accessing the hit pages of offline lists.

The Adabas Audit Data Retrieval cache spool comprises one or several files of this type.

Spool file models

Spool file models enable Adabas Audit Data Retrieval to allocate spool files automatically as required.

Adabas Audit Data Retrieval allocates required spool files when it runs out of storage space in the existing spool files. Adabas Audit Data Retrieval allocates these spool files based on the model spool definitions created using option **D.1**.

A model spool file does not require any storage space while its status is MODEL.

Important

To prevent the system from running out of storage space, you must ensure that there are always spool file model definitions available for each type of spool file (see "Creating spool model definitions" on page 332).

By default, Adabas Audit Data Retrieval uses the standard spool files (Type = SP) also for reloaded lists/reports. It is possible to use separate spool datasets for reloaded lists and reports. If you are using separate spool datasets for reloading (B08_RELOAD_SEPARATE_SPOOL = YES), you also have to provide model definitions for reload spool files (type = SR).

Spool file size

We recommend that you use a small number of large spool files rather than a large number of small spool files. Using a small number of spool files reduces the time required by batch jobs to allocate the datasets and the amount of memory used by batch jobs.

The first four spool files are allocated by the B97DBFOR job.

Maximum number of open spool files

The maximum number of spool files (cache, global, index, and spool) that can be opened by Adabas Audit Data Retrieval is 32000.

Important: The operating system may have a lower limit for the maximum number of open files. For more information, see the description of the task I/O table (TIOT) in the IBM publication *MVS Initialization and Tuning Reference*, chapter "ALLOCxx (allocation system defaults)".

Spool files in the Dataset Definition Selection table

The following panel shows the three types of spool files. The status of each spool file is displayed in column **Sta**:

- Spool files currently in use have the status OPN (open).
- Spool files that have been allocated, but do not contain data, have the status EMP (empty).
- Spool file models have the status MOD (model).
- Spool files that are currently being formatted have the status FMT (format).
- Spool files that could not be allocated, formatted, or opened have the status ERR (error).

**Dataset Definition
Selection table**

```

PEB5DD10 ----- Row 1 of 25
Command ==> _____ Scroll ==> PAGE

Dataset Definition Selection Page 1 of 3
                               ( LEFT/RIGHT )
Databases for Subsystem SSID B92P          SYSVAR Support : INACTIVE

I - Insert Model                      F - Format Model
S - Select Dataset Definition or      D - Delete Model or Empty
  Update Model or Status              R - Reset Model (ERR)
X - Database Extension                RX - Reset Database Extension (FEX)

Sel  Dataset Name                      X Total   Free      % Sta
     BETA97.DB.CACHE01                 00180000 00164460 008 OPN
     BETA97.DB.CACHE02                                     000 FMT
     BETA97.DB.CACHE03                                     000 MOD
     BETA97.DB.GLOBL01                 00000180 00358200 001 OPN
     BETA97.DB.INDEX01                 00360000 00000180 099 OPN
     BETA97.DB.INDEX02                                     000 ERR
     BETA97.DB.INDEX02                 00360000 00328920 008 OPN
     BETA97.DB.INDEX03                 00000180 00358200 001 EMP
     BETA97.DB.INDEX04                                     000 MOD
     BETA97.DB.SPOOL01                 00180000 00164460 008 OPN
     BETA97.DB.SPOOL02                                     000 MOD
    
```

Creating spool model definitions

Overview

The installation job B97DBFOR allocates one spool file of each type during installation. After the installation is complete, you must manually add a sufficient number of spool model definitions of each type.

Defining spool file models

To define a spool file model:

1. From the Primary Selection Menu, choose option D - DATABASE, then 1 - DATABASE.

The "Dataset Definition Selection" panel is displayed.

2. Enter the line command **I** in front of any dataset.

The "Insert Model Definition" panel is displayed.

Note: We recommend that you enter the line command **I** in front of a spool file of the same type. Then most of the fields in the insertion panel will already display the correct values and the amount of typing you have to do in this panel will be reduced.

3. Type a new name (or number) for the spool file in the **Data Set Name** field. Accept or change the entries in the other fields according to your wishes and press ENTER to save the spool file model.

Model Insert panel

```

PEB5DDR3 -----
Command ==> _____

Insert Model Definition

Product      ==> B97_____          SYSVAR Support : INACTIVE

Data Set Name ==> BETA97.DB.CACHE04.....

Data Set Type ==> CA      (CA - Cache, GL - Global, IX - Index, SP - Spool
                        SR - Reload)

4 KB blocks  ==> 1. (1-7, for CIsizes)  If managed by SMS:
Volume       ==> SMS...                MGMTCLAS ==> _____
Space Allocation Requirements:          STORCLAS ==> _____
Primary Space ==> 100... (Cylinders)    DATACLAS ==> _____

Press the ENTER key to confirm your request.
Press the END key to abort your request and to return to the previous panel.
    
```

Fields

Field	Description
Product	Always B97
Dataset Name	Valid dataset name
Dataset Type	Type of spool file: CA Cache spool file GL Global spool file IX Index spool file SP Standard spool file SR Spool file for reloaded lists/reports
4 KB blocks	Size of the CI (in 4K blocks) Allowed values: 1..7 Enter a value between 1 and 7. This value will be multiplied by 4096. Recommended: 1 (for a CIsizes of 4096)
Volume	Volume or SMS for SMS managed datasets
Primary Space	Size of the spool file (in cylinders) Allowed values: 1..9999
MGMTCLAS/ STORCLAS/ DATACLAS	Parameters for SMS managed datasets

Formatting a spool file model manually

If you do not want Adabas Audit Data Retrieval to allocate and format spool files as needed but want to do this beforehand, you may also allocate and format the spool files manually.

To allocate and format a spool file:

1. In the Dataset Definition Selection panel, enter line command **F** in front of a spool file model definition.
2. In the displayed panel, press ENTER to confirm the requested command.

Deleting spool files

Deleting spool files

Deleting spool files with the help of the ISPF online application is **not** supported by Adabas Audit Data Retrieval. Use the program BST05CMD instead (see "Notes on model spool file definitions" in *BSA Installation and System Guide*).

Deleting a spool file includes two steps:

1. The program BST05CMD removes the entry of the spool file from the Adabas Audit Data Retrieval database definition file (BETA97.DB.DEF). The Adabas Audit Data Retrieval started task must be stopped when you do this.
2. With the help of the IBM utility IDCAMS or ISPF online option 3.4, the spool file is deleted physically.

Important: Make sure that the physical deletion of a file will not lead to the loss of data that is still needed. If you have removed a wrong entry from the database definition file by mistake, you can reinsert this entry with the help of the program BST05CMD, provided that the original ID of this file has not been reassigned.

Status must be EMP, MOD, or ERR: The program BST05CMD checks the status of the spool file before removing its entry. It is only possible to delete a spool file if its status is EMP (empty), MOD (model) or ERR (error).

Emptying spool files

If you want to remove a spool file that is not empty, begin by changing the status of the spool file to Read-Only. This prevents new data from being added to this spool file, but ensures that data currently on this spool file remains available to the system.

To change the status of a spool file to Read-Only:

1. Stop the Adabas Audit Data Retrieval reader started task.
2. In the Dataset Definition Selection panel, enter line command **S** in front of the spool file.
3. Specify **Yes** in the **Data Set Status Readonly** field and press ENTER.
4. Restart the Adabas Audit Data Retrieval reader started task.

As to the data remaining in this spool file, you have two options:

- You wait until online cleanup jobs have finished removing the data from the spool file and the status of the spool file has eventually become EMP (empty).
- You "migrate" the spool content by completely reloading the affected data from the archive. This will render the data contained in the spool file obsolete.

Note: Read-only spool files are always checked at startup to ensure the deletion of unused reader blocks, irrespective of the value of the LST parameter BQL_SPOOLCHECK.

What you should do when a spool file has the status error

Overview

When a spool file has the status error, find out what type of error has caused the error status:

- Error when **allocating** the spool file
- Error when **formatting** the spool file
- Error when **opening** the spool file

This section describes how you can find this out and what you should do after you have found out.

Opening error

When an error occurs while opening a spool file, the corresponding IDC error message is written to the log of the started task.

Search the log of the started task for the name of the spool file in question to find out whether there is an error message of this type. If you find this error message, stop the corresponding system and (with the help of your system programmer) check why the spool file could not be accessed (volume not available, etc.).

Warning: Do not use the line command **R** (Reset) with an existing VSAM file. Resetting the status of an existing VSAM file to MODEL would make the data in this spool file unavailable.

Formatting error

When there is an error when formatting a spool file, a log is written to DD SYSPRINT of the started task.

Check whether a formatting error was logged in DD SYSPRINT. If yes, use the line command **R** to reset the status of the spool file to MODEL.

Allocation error

When there is an error when allocating a spool file, a log is written to DD SYSPRINT of the started task.

Check whether an allocation error was logged in DD SYSPRINT. If yes, remove the cause of this error (security, space, etc.) and use the line command **R** to reset the status of the spool file to MODEL.

Displaying modification and PTF levels

Displaying the Adabas Audit Data Retrieval and BSA level

To display the installed Adabas Audit Data Retrieval and BSA level:

- From the Primary Selection Menu, choose option **P.2**.

The system and PTF level of the active Adabas Audit Data Retrieval subsystem will be displayed on the left side of the screen, and the system and PTF level of the active BSA will be displayed on the right side of the screen.

```

PEB0PRF -----
Command ==>

Beta System Profile Options

System Name      ==> B97PROD.
System Location  ==> BERLIN.....
Subsystem ID     : B97P
System Level     : V7R2-nn      bsa Level      : nnnn-nn
System PTF Level : xxxnnnn     bsa PTF Level : PBSnnnn

User Date Mask   ==> MM/DD/YYYY  MM/DD/YY, DD.MM.YY, DD/MM/YY, YY.DDD
                                     MM/DD/YYYY, DD.MM.YYYY, DD/MM/YYYY
                                     YYYY.DDD, YYYY-MM-DD
Beta Product Language ==> E      available Languages

Extended Help Mode ==> YES      (Y)es, (N)o

Press the ENTER key to update your system profile options.
Press the END key to return to the previous menu.

```

PTF level NONE

PTF level NONE means that there are no PTFs.

SVC level

The JES message log of the Adabas Audit Data Retrieval started task procedure contains several information messages specifying:

- Name of B97LSTxx member
- SVC number and PTF level
- Adabas Audit Data Retrieval subsystem ID
- BSA level and PTF number

To find out which BSA and SVC level is currently installed, search JESMSGLG for message IRM9151I.

```

IRM9151I B97LSTxx LOADED, SVC(svcnum/svcLvl/epaddr) SSID(ssid)
                                     SYSNAME(sysname) SYSPLEX(sysplex) SYSTEM(z/OSn.nn) ASIDX(asidx)
IRM9151I BSA INITIALIZATION 177100 LEVEL: nn / bsaptfLvl / bsasffLvl
IRM9151I CPU INFORMATION

```

Browser level

To display the Beta Browser level:

1. Display any list in the Beta Browser.
2. Enter the primary command PAB in the Browser command line.

This will display a panel containing debugging information. The levels of the active Beta Browser modules are displayed at the bottom of this panel.

```
PE23PAB -----  
Command ==> _____  
  
List Token : 3D8A79004377FCFF      PAB Token : C27586FFBD029860  
  
Buffer Size Expanded      : 9919  
PAB Size                   : 9997  
Actual Page Number       : 1  
Number of Lines Real (Displayed) : 247      ( 244 )  
Status                     : 00  
                           : 00  
Recfm                      : VBM  
Lrecl                      : 32756  
Advanced Format            : 00  
Method                    : 00  
Control Character Position : 0  
TRC Character             : 00  
  
B23B00 Version : V7R2Mnn PTF Level Level  
B23PAB Version : V7R2Mnn PTF Level Level  
B23SSB Version : V7R2Mnn PTF Level Level  
B23 Level Info : V7R2-nn PTF Level Level
```

Calling the BSA Service Manager (Option D.S)

Overview

The BSA Service Manager provides the following functions:

- Changing LST parameters while the started task is running
- Activating functions like TCP/IP dynamically
- Displaying detailed system and status information
- Running diagnostic reports and SMF reports

The panels of the Service Manager are available in English only.

Procedure

To call the Service Manager, choose option **S** from the Service and Database Selection menu.

```

PEB4PRM1 -----
Option ==>> _____

Service Manager Selection Menu                               Subsys-ID - B97P
                                                            Sysname  - B97PROD

  1  PARM          -  Display/Change Started Task Parameters

  2  OPERATION    -  Monitor/Control Started Task
  3  APPLICATION  -  Monitor/Control Started Task Applications
  4  CONNECTIVITY -  Monitor/Control Started Task Connectivities

  5  SUBSYSTEMS   -  Work with Subsystems

  R  REPORTS      -  Display Diagnostic Reports Selection Menu (TSO only)
  S  SMF          -  Display Selection Menu of beta smf         (TSO only)

  D  DATABASE     -  Display Database Selection Menu

Select one of the above options. Press END to return to the previous menu.

```

More information

The BSA Service Manager is described in the *BSA Service Manager Manual*.

Generating JCL for database utilities

Overview

You can generate JCL for the maintenance of the Adabas Audit Data Retrieval database (ENLARGE, REDUCE, ALTER, etc.) with Option 4 - UTILITIES.

The option uses skeletons from the BSA skeleton library (ISPSLIB) and generates the JCL according to your input in the displayed panels. You can display, send or save the generated JCL in a member.

Note

Please note the following:

- The libraries that are currently allocated by the Adabas Audit Data Retrieval started task are used for generating the JCL. (This option does **not** use the libraries specified in the system options.)
- If mirror databases exist, they are automatically taken into consideration when the JCL is generated.

Instructions

To generate JCL for a database utility:

1. Select Option 1 - Database, then Option 4 - UTILITIES.
The Adabas Audit Data Retrieval databases are displayed in a table.
2. Enter the line command **S** in front of the desired database.
3. In the displayed panel, select the maintenance task for which you would like to generate the JCL and follow the instructions in the displayed panels.

Maintenance tasks

The maintenance tasks offered depend on the respective database type:

- Type Data (**DA**)
 - 1 ENLARGE
 - 2 REDUCE
 - 3 ALTER
 - 4 MOVE (alter with copy)
 - 5 UPD-HWM (change the High Water Mark)
 - 6 UNLOAD
 - 7 LOAD
 - 8 REBUILD (recreating the key file)
- Type Key (**KE**)
 - 1 ENLARGE
 - 2 REDUCE
 - 3 ALTER
 - 4 MOVE (alter with copy)
 - 5 UPD-HWM (change the High Water Mark)
- Type Sync (**SY**)
 - 1 ALTER
 - 2 RE-ALLOC (re-allocate)
 - 3 CLEARSYN
- Type Log (**LO**)
 - 1 ALTER
 - 2 RE-ALLOC (re-allocate)
- Spool file of any type (Spool (**SP**), Reload (**SR**), Index (**IX**), Cache (**CA**) or Global (**GL**))

None
- Definition file (**NO**)

None

Further information

For more information on individual database utilities, see "Databases and database batch utilities" in *BSA Installation and System Guide*.