

Reviewing the Database Report

Selecting Database report (option **R**) from the **Main Menu** displays the **Database Report** menu:

Options on the **Database Report** menu provide information only; none of the displayed information can be changed. However, direct commands can be entered on this menu to invoke other Adabas Online System (AOS) functions for making changes.

Database Report functions provide both general and specific information in either table or report format. They correspond to selected functions of the Adabas ADAREP utility.

```

17:10:08          ***** A D A B A S  BASIC  SERVICES *****          2009-08-24
                   - Database Report -                               PDR0002

Code      Service
-----
C         List files with crit. no. of extents
D         Display field description table (FDT)
F         Display file(s)
G         General database layout
L         List VOLSER distribution of database
R         Display ASSO/DATA block (RABN)
U         Display unused storage
?         Help
.         Exit
-----

Code ..... _
File No ..... 66_____ Password ..
Database ID .. 1955   (WIS1955)
VOLSER ..... _____

Command ==>
PF1----- PF2----- PF3----- PF4----- PF6----- PF7----- PF8----- PF12-----
Help                Exit                Menu

```

Options allow you to view database-level general information and tables of database files, files whose extents are at or near the allowable maximum, file-specific information for any file, physical database distribution by volume/serial number (VOLSER), and available space that is not currently being used. Additional displays are available using direct commands.

The **Database Report** provided in AOS includes the following information, selected using the appropriate option code, as follows:

Option	Function
C	<i>Displaying Files with Critical Number of Extents</i> shows a list of the files that have a critical number of extents.
D	<i>Displaying Field Definition Table (FDT)</i> shows the field definition table (FDT) and special descriptor table (SDT) for the specified file.
F	<i>Displaying Files</i> shows file(s), either a list of all files in the specified database or detailed information about a specific file.
G	<i>Displaying General Database Layout</i> shows the general layout of the specified database.
L	<i>Displaying Volume/Serial Numbers for Database</i> shows the volume/serial number layout of the specified database.
R	<i>Displaying RABNs</i> shows Associator / Data Storage blocks (RABNs).
U	<i>Displaying Unused Storage</i> shows unused storage.

Displaying Files with Critical Number of Extents

Option **C** (List files with crit. no. of extents) on the **Database Report** menu provides a list of the files in the database that are at the critical number of extents. If no such files exist in the database, a message is displayed.

Note:

The exact extent count is provided in the general Display File(s) (**F**) option by table type (AC, NI, UI, or DS).

Displaying Field Definition Table (FDT)

Option **D** (Display field description table (FDT)) on the **Database Report** menu provides a list of the field definitions in the FDT. The Display FDT screen appears.

Note:

For more detailed information about field definitions, read your Adabas ADACMP utility documentation; for more information about interpreting FDTs, read your Adabas ADAREP utility documentation. Both are available in the *Adabas Utilities* documentation.



```

02:12:53          ***** A D A B A S  BASIC  SERVICES *****          2009-12-19
DBID 1955          - Display FDT -          PDRD032

Field Description Table: File 29          (TEST-29)
=====          Total Fields without SDT ... 16
***** T o p  o f  F D T *****
Lev  I Name I Leng I Form I Options I Predict Fld Name or DT / SY
-----I-----I-----I-----I-----I-----
  1  I  AA  I  004  I  A  I
  1  I  BB  I  004  I  A  I
  1  I  BC  I  004  I  A  I
  1  I  AE  I  004  I  A  I  DE
  1  I  AF  I  004  I  A  I  XD UQ
  1  I  SF  I  008  I  A  I
  1  I  SB  I  008  I  B  I  *Deleted Field*
  1  I  SH  I  016  I  A  I
  1  I  SS  I  016  I  B  I  TZ          DT=E(TIMESTAMP)
  1  I  SG  I  003  I  B  I
  1  I  SP  I  008  I  B  I  *Deleted Field*
  1  I  SQ  I  008  I  B  I  DE

PF1----- PF2----- PF3----- PF4----- PF6----- PF7----- PF8----- PF12-----
Help          Exit          --          -          +          Menu
    
```

For a specified file, option **D** displays the field definition table (FDT), which includes:

- the total number of fields in the file;
- the level number of each field;
- the two-character name of each field;
- the length of each field in bytes;
- the data type (format) of each field: Alphanumeric, Binary, Fixed point, floatinG point, Packed decimal, Unpacked decimal, or Wide-character;
- data definition options for each field: CK for untranslatable characters, DEscriptor, FIxed storage, Long Alphanumeric, MUltiple-value field, Null/not Counted (that is, SQL null representation), Null/Not allowed, NUll value suppression, NV no conversion, PEriodic group (the fields that compose the periodic group are those that follow and have a higher level number), UniQue descriptor value;

Note:

If an online inversion of a field is in process, this information is noted in the Options column. In addition, if the field has been deleted online, this information is noted in the Options column.

- equivalent Predict names, if any, for each field or, if the field is a date or time, the edit mask used for the field. A complete description of edit masks can be found in your Adabas documentation.

On the Display FDT screen, press PF2 to access the special descriptor table (SDT) for the file on the Display SDT screen:

```

17:34:32          ***** A D A B A S  BASIC  SERVICES *****          2009-08-24
DBID 1955          - Display SDT -          PDRD012

SUB-/SUPER Table: File 1          (EMPLOYEES)
=====

Type  I Name I Length I Format I Options          I Structure          I
-----I-----I-----I-----I-----I-----I-----I-----I-----I
SUPER I  H1  I    4  I    B  I DE NU          I AU (    1 -    2 )I
      I   I   I   I   I   I          I AV (    1 -    2 )I
PHON  I  PH  I   I   I   I          I PHON( AE )        I
SUB   I  S1  I    4  I    A  I DE          I AO (    1 -    4 )I
SUPER I  S2  I   26  I    A  I DE          I AO (    1 -    6 )I
      I   I   I   I   I   I          I AE (    1 -   20 )I
SUPER I  S3  I   12  I    A  I DE NU PE       I AR (    1 -    3 )I
      I   I   I   I   I   I          I AS (    1 -    9 )I

PF1----- PF2----- PF3----- PF4----- PF6----- PF7----- PF8----- PF12-----
Help      Disp FDT  Exit          --          -          +          MENU

```

The SDT provides field information about all sub-/super-/hyperdescriptors, collation descriptors, phonetic descriptors, and sub-/superfields for the file.

In addition to the field's special descriptor type, two-character name, length, format (data type), and data definition options, the SDT identifies the structure of the special descriptor; that is, the component fields and field bytes of sub-/super-/hyperdescriptors and sub-/superfields; the equivalent alphanumeric elementary fields of phonetic descriptors; and the associated user exit of collation descriptors.

The equivalent direct commands are:

```
DISPLAY FDT file-number
```

Displaying Files

If no particular file is specified, option **F** (Display file(s)) on the **Database Report** menu lists all files in the specified database. If a file is specified, option **F** provides detailed layout information for the file. Physical device and file layout information is available only for a specific file.

This section covers the following topics:

- Display a List of Files in the Specified Database
- Display Information for a Specific File

Display a List of Files in the Specified Database

When no file number or "0" (zero) is specified in the File No field on the **Database Report** menu, a list of the files in the specified database is displayed on the Display Files screen:

18:31:39		***** A D A B A S BASIC SERVICES *****						2009-08-24		
DBID 1955		- Display Files -						PDRF032		
Fnr	File Name	Loaded YY-MM-DD	Top-ISN	Max-ISN	Extents				Ind. %Used	
					NI	UI	AC	DA	ACISEXU	A D
1	EMPLOYEES	09-02-17	1107	1695	2	1	1	1	NNISNNN	77 92
2	VEHICLES	09-02-17	773	1695	1	1	1	1	NNISNNN	86 12
3	MISCELLANEOUS	09-02-17	1779	2543	2	1	2	1	NNISNNN	86 53
6	EXPANDED	09-02-17	1107	1600	1	1	1	1	NNISNXN	74 46
7	EXPANDED	09-02-17	3107	3600	1	1	1	1	NNISNXN	74 46
10	TRIGGER-FILE	09-02-17	0	1695	1	1	1	1	NNISNNN	8 0
11	NAT-SYSTEM	09-02-17	62118	80559	1	1	1	1	NNISNNU	96 97
12	NAT-USER	09-02-17	366	30527	1	1	1	1	NNISNNN	45 50
13	NAT-FDIC	09-02-17	6	5087	1	1	1	1	NNISNNN	33 1
19	CHECKPOINT	09-02-17	1821	2543	1	1	2	1	NNNSNNN	2 9
20	FILE-1955-20	09-03-04	16	1695	1	1	1	1	NNNSNNN	5 20
21	FILE-1955-21	09-03-04	7	1695	1	1	1	1	NNNSNNN	0 10
22	22-SPAN	09-08-03	35	57663	1	2	2	2	NNNSNNN	0 19
23	REPL BRO	09-07-22	1000	20351	1	1	1	1	NNNSNNN	0 1

PF1-----	PF2-----	PF3-----	PF4-----	PF6-----	PF7-----	PF8-----	PF12-----
Help	Repos	Exit	Extents	--	-	+	Menu

The PF2 (Reposition) key displays a window in which you can enter a new starting value for the file list. When you enter a file number, the Display Files list begins with that file.

If the extents (NI, UI, AC, and DA) listed on this screen exceed 99 and you want to see their actual values or if you would like to see the value of any secondary AC extent, press the PF4 (Extents) key. The window changes slightly to show the expanded values of the extents, although, due to screen space, the indicators are removed.

The Display Files screen provides the following information for each file:

- file number and file name;
- date the file was loaded into the database;
- highest ISN currently in use in the file and the highest ISN allowed in the file;
- number of logical extents currently assigned: by Associator (*N* ormal index; *U* pper index; *A* ddress converter) and *D* ata Storage. A maximum of five logical extents may be allocated to a file.
- block padding factor percentage defined for the Associator and for Data Storage;
- indicators as follows:

Indicator	Description
A	ADAM option: A = ADAM ISN- or descriptor-selected file; N = non-ADAM file.
C	coupled (C) or non-coupled (N) file.
I	ISNs are reusable (I) or not (N).
S	Data Storage blocks are reusable (S) or not (N).
E	data files are ciphered/encrypted (E) or not (N).
X	files are expanded (X) or normal (N).
U	USERISN option: U = option is in effect for the file; N = option is not in effect.

- percentage of allocated space currently used by the file in the Associator and in Data Storage.

The equivalent direct command is

```

DISPLAY FILE
```

Display Information for a Specific File

When a valid file number is specified on the **Database Report** menu, the following Display File Layout screen appears for that file (some of the items shown on the following sample screen only appear if those features are activated or used):

```

02:21:28          ***** A D A B A S  BASIC  SERVICES *****          2009-12-19
DBID 1955          - Display File Layout -          PDRF043
*****
* File 29          * TEST-29
*****

Records loaded    ..... 0          Date loaded ..... 2009-07-29 10:40:22
TOP ISN           ..... 0          Date of last update .. 2009-07-29 10:40:22
Max ISN expected  ... 847          Max Compr Rec Lngth .. 5060
Minimum ISN       ..... 1          Asso/Data Padding .... 10%/10%
Size of ISN       ..... 3 Bytes    Highest Index Level .. 3
Number of Updates .. 0          RPLUPDATEONLY. No
ISN Reusage       ..... No         USERISN ..... No   PGMREFRESH ..... No
Space Reusage     ..... Yes        MIXDSDEV ..... No  NOACEXTENSION .. No
ADAM File         ..... No         Spanned rec .. No   MU/PE indices .. 1
Ciphered File     ..... No         Replication .. No   Privileged Use . No
Coupled Files     ..... None
Blk per DS Extent .. 0
Blk per UI Extent .. 0
Blk per NI Extent .. 0          Multi Client File .... 0
                                Press Enter to display more information

PF1----- PF2----- PF3----- PF4----- PF6----- PF7----- PF8----- PF12-----
Help          Exit          Refresh          Menu
```

```

02:22:19          ***** A D A B A S  BASIC  SERVICES *****          2009-12-19
DBID 1955          - Display File Layout -                               PDRF043
*****
* File 29          * TEST-29                                           Page 2
*****

Last format AC ISN .. 847          Date FCB modified .... 2009-08-21 12:12:04
File readonly mode .. No          Date FDT modified .... 2009-09-25 20:30:27
FDT deleted field ... Yes
File has l/c fields . No
FDT has F,8 field ... No
FDT w/datetime mask . No
FDT w/system fields . No          SYFMAXUV value ..... 0

Free space available for file extents: At least 133 Extents

PF1----- PF2----- PF3----- PF4----- PF6----- PF7----- PF8----- PF12-----
Help          Exit          Refresh          Menu

```

The information for the file can be refreshed by pressing PF4. You can display additional information about UES codes, coupling, LOB file/fields and space allocations by pressing Enter.

The equivalent direct command is:

```
DISPLAY FILE file-number
```

The Display File Layout screen displays the following kinds of information for the file:

- the file number and name;
- the number of records currently contained in the file;
- ISN information: the highest ISN currently used in the file; the highest ISN planned for the file (see the ADALOD utility's MAXISN parameter); the lowest ISN that can be assigned to a record in the file (see the ADALOD utility's MINISN parameter); whether 3- or 4-byte ISNs are used for the file; and whether ISNs can be reused.
- the total number of updates since the file was last loaded;
- other file option settings: whether Data Storage space can be reused; whether the file was loaded with the ADAM option, the cipher option, the USERISN option; whether the file is physically coupled to another file; whether Data Storage extents can be on different device types; whether the file can be refreshed using the E1 command; whether the file permits the MAXISN setting to be increased.
- the number of blocks allowed per Data Storage, upper index, and normal index extent;
- the date and time the file was last loaded;

- the date and time of the last update to the file;
- the maximum compressed record length permitted for the file (see the ADALOD utility's MAXRECL parameter);
- the padding factor for the Associator and for Data Storage;
- the highest index level currently active for the file;
- whether the file may be updated only by the Event Replicator Server as part of Adabas-to-Adabas replication or by other means as well (RPLUPDATEONLY);
- whether or not index compression is turned on for the file;
- whether universal encoding support (UES) is being used;
- whether the file contains spanned records;
- the number of MU/PE indices in the file;
- whether replication has been activated for the file;
- the DSF changes being logged for the file;
- the total number of blocks in the file that have been changed by updates since the file was last loaded;
- the length of the owner ID for multiclient files.
- the maximum number of occurrences of MU system fields that can be stored in the file.

When universal encoding support (UES) is being used, pressing Enter from the initial Display File Layout screen lists the current code values:

```

15:33:00          ***** A D A B A S  BASIC  SERVICES  *****          2009-08-25
DBID 1955          - Display File Layout -          PDRF012

Universal Encoding Support enabled for this file

Encoding Keys:
File Alpha Code ..... 37
File Wide Code ..... 4095
User Wide Code ..... 4095
    
```

In any case, pressing ENTER from the initial Display File Layout screen displays the following space allocation and usage information:


```

02:11:11          ***** A D A B A S  BASIC  SERVICES *****          2009-08-25
DBID 1955          - Display General DB-Layout -                          PDRG012

Database Name ..... WIS1955
Database Number ..... 1955
Database Version ..... 8.2
Database Load Date ..... 2009-02-17 19:07:58

System Files ..... 19 , 0 , 10 , 0 , 0 , 0 , 0
Maximum Number of Files .. 1000
Number of Files Loaded ... 18
Highest File Loaded ..... 66
Trigger File Number ..... 10

Size of RABN ..... 3 Bytes
Current Log Tape Number .. 77
Delta Save Facility ..... Inactive          Replication Facility ..... Yes
Recovery Aid Facility .... Inactive
Universal Encoding Sup. .. Inactive

PF1----- PF2----- PF3----- PF4----- PF6----- PF7----- PF8----- PF12-----
Help                Exit                Menu

```

You can display additional information about UES codes, coupling, and space allocations by pressing Enter.

The Display General DB-Layout screen displays the following information for the file:

- the name and number of the database;
- the version level of the Adabas database software;
- the date and time the database was loaded;
- the numbers of Adabas system files allocated to the database;
- the maximum number of files permitted for the database; the total number of files currently loaded; and the highest file number currently in use;
- whether 3- or 4-byte RABNs are being used for the file;
- the number of the most recent data protection log tape for the database;
- whether the Adabas Delta Save Facility and/or the Adabas Recovery Aid (ADARAI) are active or inactive for the database.
- whether universal encoding support (UES) is being used.

When universal encoding support (UES) is being used, pressing ENTER from the initial Display General DB-Layout screen lists the current code values:

```

15:51:22          ***** A D A B A S  BASIC  SERVICES  *****          2006-07-20
DBID 105          - Display General DB-Layout -          PDRG002

Universal Encoding Support Enabled

UES Encoding Keys:
Alpha File Encoding ..... 37
Wide File Encoding ..... 4095
Alpha ASCII Encoding ..... 437
Wide User Encoding ..... 4095
    
```

In any case, pressing Enter from the initial Display General DB-Layout screen displays the following space allocation and usage information:

```

02:15:32          ***** A D A B A S  BASIC  SERVICES  *****          2009-08-25
DBID 1955          - Display General DB-Layout -          PDRG012

      IDeviceI      Total Number of      I      Extents      in Block      I DD-Names I
      I Type I      Blocks /      Cyls. I      From      To      I      I
-----I-----I-----I-----I-----I-----I-----I-----I
      I      I      I      I      I      I      I      I      I
ASSO I 3390 I      16182      60 I      1      16182 I DDASSOR1 I
      I      I      I      I      I      I      I      I      I
DATA I 3390 I      59990      400 I      1      59990 I DDDATAR1 I
      I      I      I      I      I      I      I      I      I
WORK I 3390 I      8091      60 I      1      8091 I DDWORKR1 I

PF1----- PF2----- PF3----- PF4----- PF6----- PF7----- PF8----- PF12-----
Help          Exit          Menu
    
```

Displaying Volume Serial Numbers for Database

Option **L** (List VOLSER distribution of database) on the **Database Report** menu displays the physical volumes on which the database Associator and Data Storage files are located, sorted by VOLSER number for ASSO or DATA and including the highest RABN for each extent.

The equivalent direct command is

```

DISPLAY VOLSERTAB
    
```

The Display Volser-Tab screen appears.

```

02:18:49          ***** A D A B A S  BASIC  SERVICES *****          2009-08-25
DBID 1955          -  Display Volser-Tab  -                               PDRL002

Mark entries with 'D' to display file extents on volume :

          I          I ASSO/ I Highest RABN I
          M I VOLSER  I DATA I in extent  I
-----
_ I SMS125  I ASSO I          16182 I
_ I SMS125  I DATA I          59990 I
_ I          I          I
_ I          I          I
_ I          I          I
_ I          I          I
_ I          I          I
_ I          I          I
_ I          I          I
_ I          I          I
_ I          I          I
_ I          I          I
_ I          I          I
_ I          I          I

PF1----- PF2----- PF3----- PF4----- PF6----- PF7----- PF8----- PF12-----
Help                Exit                Menu
    
```

If you mark one of the entries on this screen with "D" (or you entered the VOLSER number directly on the **Database Report** menu), the file extents of the volume are displayed indicating the RABN range and device type of each extent (table type) in each file on the List File Extents on VOLSER screen:

```

02:19:54          ***** A D A B A S  BASIC  SERVICES *****          2009-08-25
DBID 1955          -  List File Extents on VOLSER  -                               PDRL022

VOLSER = SMS125

          I ASSO/ I      From      I      To          I Device I File I      Table I
          I DATA I      Rabn      I      Rabn      I Type  I Nr.  I      Type  I
-----I-----I-----I-----I-----I-----I-----I-----I
I ASSO  I          5063 I          5086 I 3390 I 0 I DSST I
I          I          5087 I          5088 I 3390 I 19 I AC I
I          I          5089 I          5098 I 3390 I 19 I UI I
I          I          5099 I          5148 I 3390 I 19 I NI I
I          I          5149 I          5150 I 3390 I 1 I AC I
I          I          5151 I          5206 I 3390 I 1 I NI I
I          I          5207 I          5219 I 3390 I 1 I UI I
I          I          5220 I          5248 I 3390 I 1 I NI I
I          I          5249 I          5250 I 3390 I 2 I AC I
I          I          5251 I          5271 I 3390 I 2 I NI I
I          I          5272 I          5278 I 3390 I 2 I UI I
I          I          5279 I          5280 I 3390 I 3 I AC I

PF1----- PF2----- PF3----- PF4----- PF6----- PF7----- PF8----- PF12-----
Help                Exit                Menu
    
```

Displaying RABNs

Option **R** (Display ASSO/DATA block (RABN)) on the **Database Report** menu invokes the Read ASSO/DATA Block screen.

Option **R** displays two-doubleword-per-screen rows of the specified RABN block from the Associator or Data Storage in hexadecimal format. Both the hexadecimal data and its alphanumeric equivalent are displayed. If the block is not assigned, zeros are displayed.

The blocks are displayed in the length of the Associator or Data Storage block length.

You can scroll through the RABN display using the PF7 (scroll backward) and PF8 (scroll forward) keys. When using DISPLAY RABN, the offset switches to FFxx when you page past end-of-block. The display just continues to show the next block, until the offset reaches FFFF, when it returns to the first page.

You can display information for the next highest RABN (that is, the current RABN number plus one) by pressing PF4.

Displaying Unused Storage

Option **U** (Display unused storage) on the **Database Report** menu displays a table of unused storage within the database. The Display Unused Storage screen appears.

The equivalent direct command is

```
DISPLAY UNUSED
```

```
02:27:40          ***** A D A B A S  BASIC  SERVICES *****          2009-08-25
DBID 1955          - Display Unused Storage -          PDRU012
```

I Device I	Total Number of		I Extent	in Blk.		I
I Type I	Blocks	/ Cyls.	I from	-	until	I
DATA I 3390 I	26245	174	I 33746	-	59990	I
ASSO I 3390 I	1	0	I 16182	-	16182	I

```
PF1----- PF2----- PF3----- PF4----- PF6----- PF7----- PF8----- PF12-----
Help          Exit          Menu
```

Separately for the Associator and Data Storage extents, the table shows the device type where the unused blocks are located, the number of unused storage blocks and cylinders, and the range of unused block numbers.