

Adabas Client for Java

Adabas Data Designer

Version 2.0

November 2017

This document applies to Adabas Client for Java Version 2.0 and all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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Preface

This documentation contains information about the Adabas Data Designer, together with details of how to use it.

The following topic is covered:

Adabas Data Designer	Explains the main concepts behind Adabas Data Designer and describes how to use it.
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Adabas does not provide the capability to work with long names for fields. In order to use long names in Java applications, you first have to create a map file with the Adabas Data Designer.

The Adabas Data Designer is based on the Eclipse RCP and it's purpose is to:

- Create views, which can be used to browse through Adabas data and read FDT information.
- Create map definitions that contain long names instead of the two character short names of Adabas.

The map files are stored as separate Adabas files independently from the associated FDTs; they can also be in a separate database with a different database ID.



Note: One database can only contain one mapping file (named Data_Designer), but as many mappings as required. You can also have multiple mappings for one file. Please be aware that changing, e.g. renaming, deleting or reloading with different entries, will not change the mapping; in this case, it might be necessary to recreate the mapping.

Starting the Data Designer

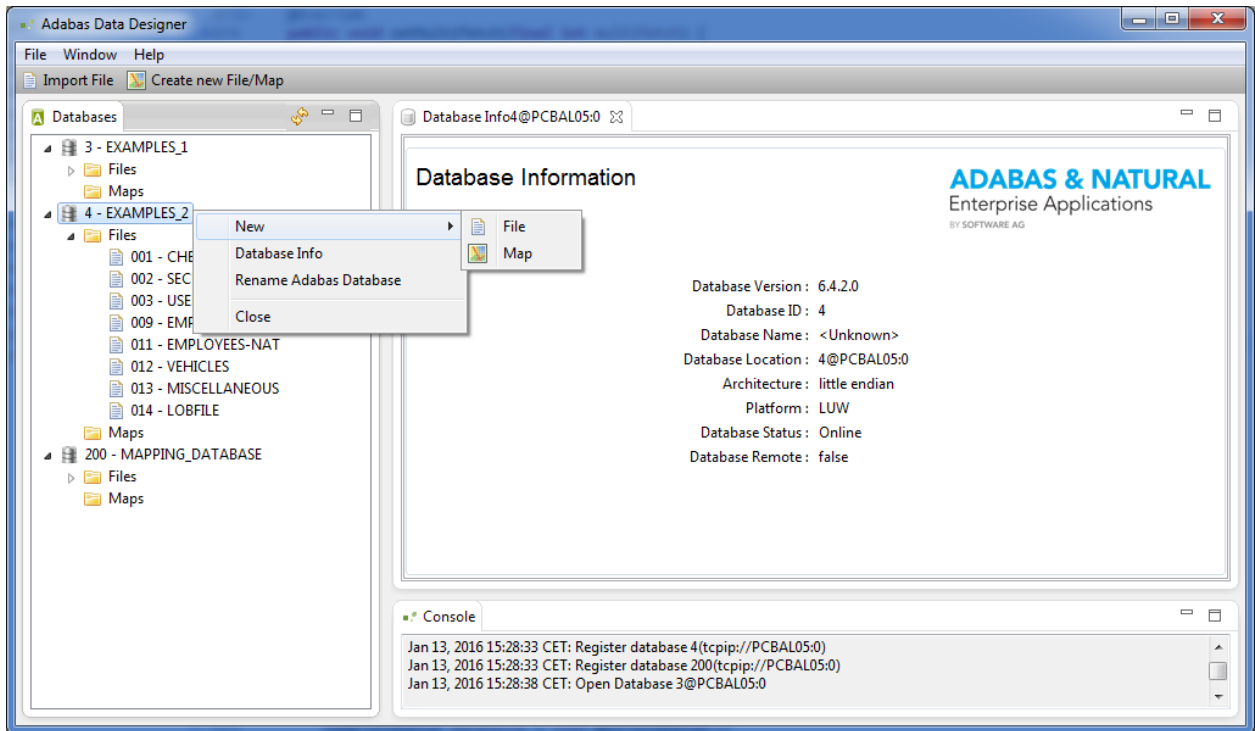
The Data Designer is a Java rich client and uses Java 8 technology. The required Java 8 runtime environment will be installed by the Software AG Installer. Please ensure that you set the correct environment e.g. by sourcing the "sagenv.new" file from the bin subdirectory of your installation, before you start the Designer for the first time. The Data Designer is started by calling the program `AdabasDataDesigner` program on Unix/Linux platforms. On Windows platforms, choose **Software AG->Tools->Adabas Client for Java->Start the Adabas Data Designer** from the **Start Menu**.



Note: On Windows, this will start the Adabas Data Designer Console in the background as a separate DOS box. Please don't close this DOS box, otherwise this will terminate the Adabas Data Designer application as well.

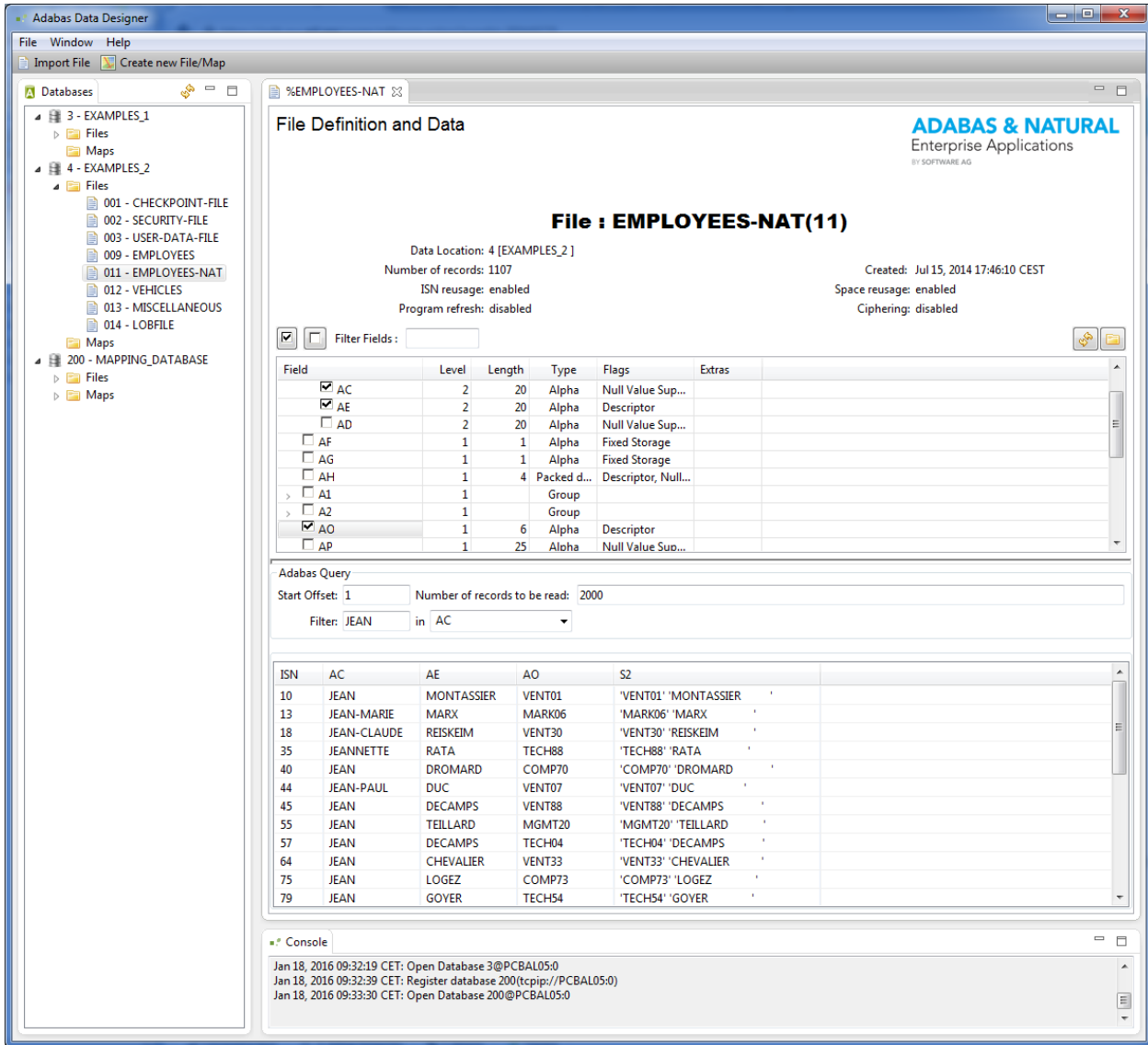
Database Information

If any local databases are active, the Designer will display them in the left tree view Databases. Open a view of the database by either double clicking on the database or by choosing the context menu **Database Info**. You can display a list of loaded files by expanding the database tree view.



Browsing Adabas Data

You can display the File Definition and the Adabas Data of an Adabas file by double clicking on the specific file in the Databases tree view or by choosing **Data Browser** in the context menu.



You can browse any field of the Adabas file by selecting it in the "File Definition and Data" view. Exceptions are fields of phonetic descriptors and referential integrity. For super descriptors, the appropriate subfields are displayed. You can search for a field using **Filter Fields**, which is especially useful for long FDTs.

The amount of data can be restricted either by using a start offset (ISN), specifying the number of records to be read or by using a filter for the contents of a specific field.

Creating Maps

Adabas does not support the capability to work with long names. In order to use long names in Java applications, you need to create a map file first. Using maps in a Java application hides the "classic" Adabas database ID/file number combination, i.e. Java applications can be developed without further knowledge about the DBID or FNR information.

The Data Designer provides two ways to create a map file:

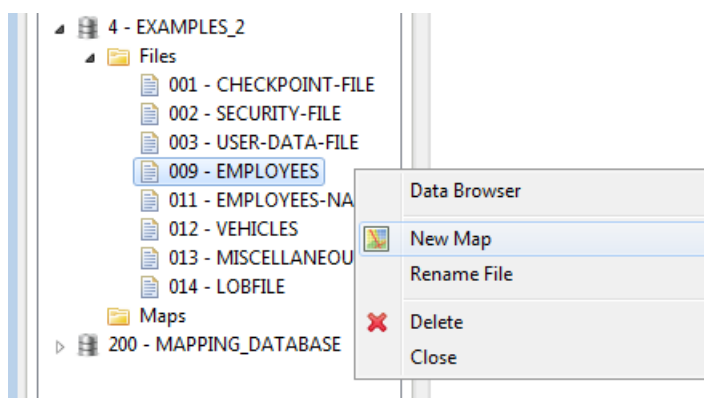
1. Create a map file definition for an existing Adabas file already loaded into the database:
 - a. Add map definitions by hand;
 - b. Load definitions from an external file.
2. Create a map definition in combination with a new Adabas file definition table:
 - a. Add map and field definitions by hand;
 - b. Load the map and Adabas field definitions from an external file.

Create Map Dialog

The create map dialog provides different possibilities to add a map definition to an existing file.

➤ To add a map to an existing file

- Choose **New Map** from the context menu of an existing file.



The file and the database will be preselected in the following dialog. There are now several data sources possible for the map definition: an Adabas ADAFDU input file with appropriate comments (see the examples files in the *demodb* subdirectory of Adabas), a DDM exported from Natural, or you can interactively add the definitions in the subsequent dialogs (free hand

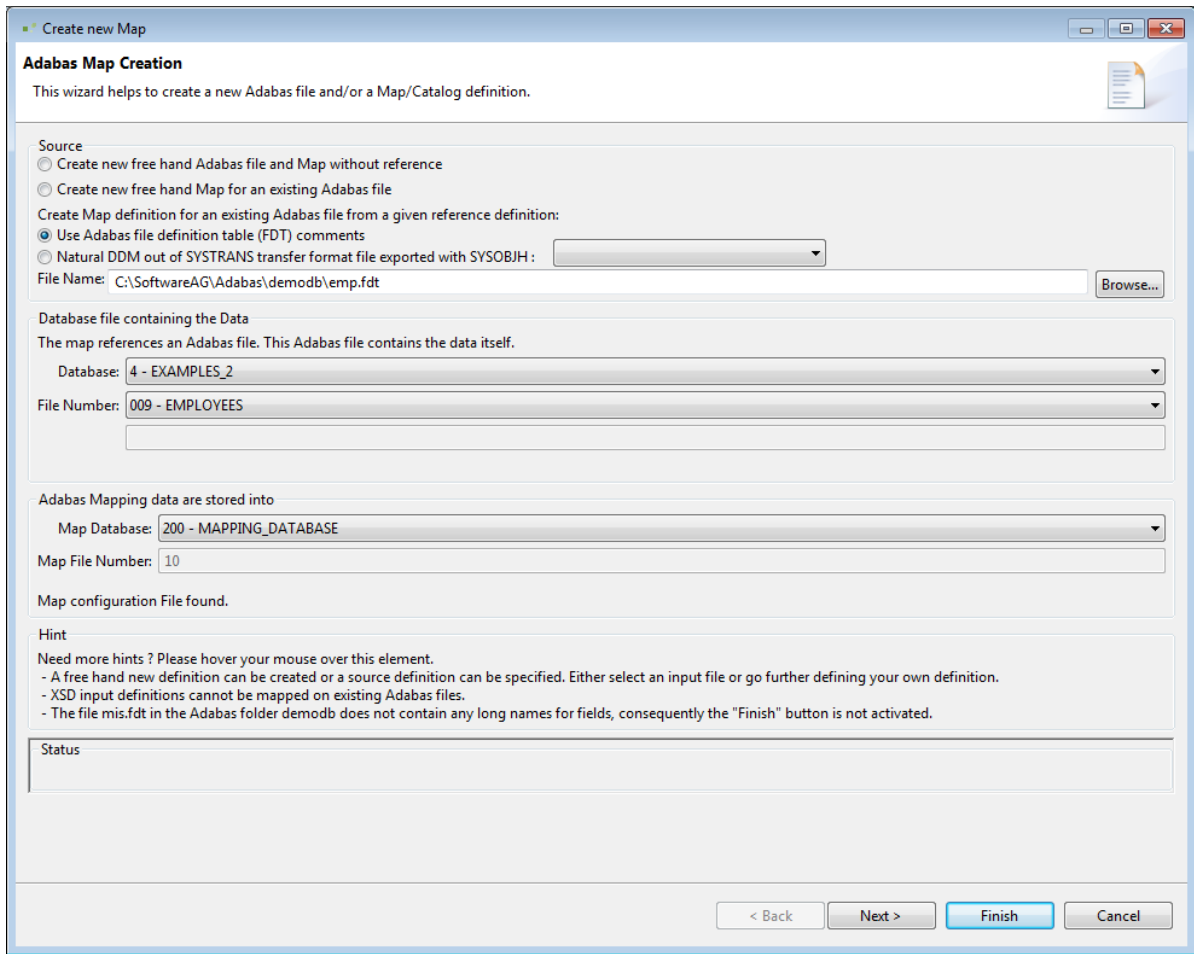
map). The following extract from the emp.fdt file shows the syntax for comments in the FDT file, which are then read and converted by the Data Designer into long names:

```

1      ,  A0                                ; personnel-data
2      ,  AA ,   8 ,   A ,  DE,NC,NN,UQ    ; personnel-id
2      ,  AB                                ; id-data
3      ,  AC ,   4 ,   F ,  DE             ; personnel-no
3      ,  AD ,   8 ,   B ,  NU,HF         ; id-card
3      ,  AE ,   0 ,   A ,  LA,NU,NV,NB    ; signature
    
```



Important: Select the database and file where the new map definitions are to be stored. This can be the same database as files for which the maps are defined, or it can be any other database.



After you have selected the source, the next dialog provides the possibility of adding/changing long names for the FDT.

Create new Map

Adabas Map Definition
Create new Adabas Mapping file

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File Name: MAP_FILE_9

Level	Long Name	Adabas Name	Length	Type	FDT	Flags	Extra
1	personnel-data	A0		Group			
2	personnel-id	AA	8	Alpha	A	DE NC NN UQ	
2	id-data	AB		Group			
3	personnel-no	AC	4	Fixed Point	F	DE	
3	id-card	AD	8	Binary	B	NU HF	
3	signature	AE	0	Alpha	A	LA NU NV NB	
1	full-name	B0		Group			
2	first-name	BA	40	Unicode	W	NU	
2	middle-name	BB	40	Unicode	W	NU	
2	name	BC	50	Unicode	W	NU DE	
1	mar-stat	CA	1	Alpha	A	FI	
1	sex	DA	1	Alpha	A	FI	
1	birth	EA	4	Packed deci...	P	DE NC	
1	private-address	F0		Period Group			
1	business-address	I0		Period Group			
1	dept	JA	6	Alpha	A	DE	
1	job-title	KA	66	Unicode	W	NU DE	

Field entry editor

Name: private-address

Type: Period Group

Size:

Short Name: F0

Parent Group Field: ----

Valid definition

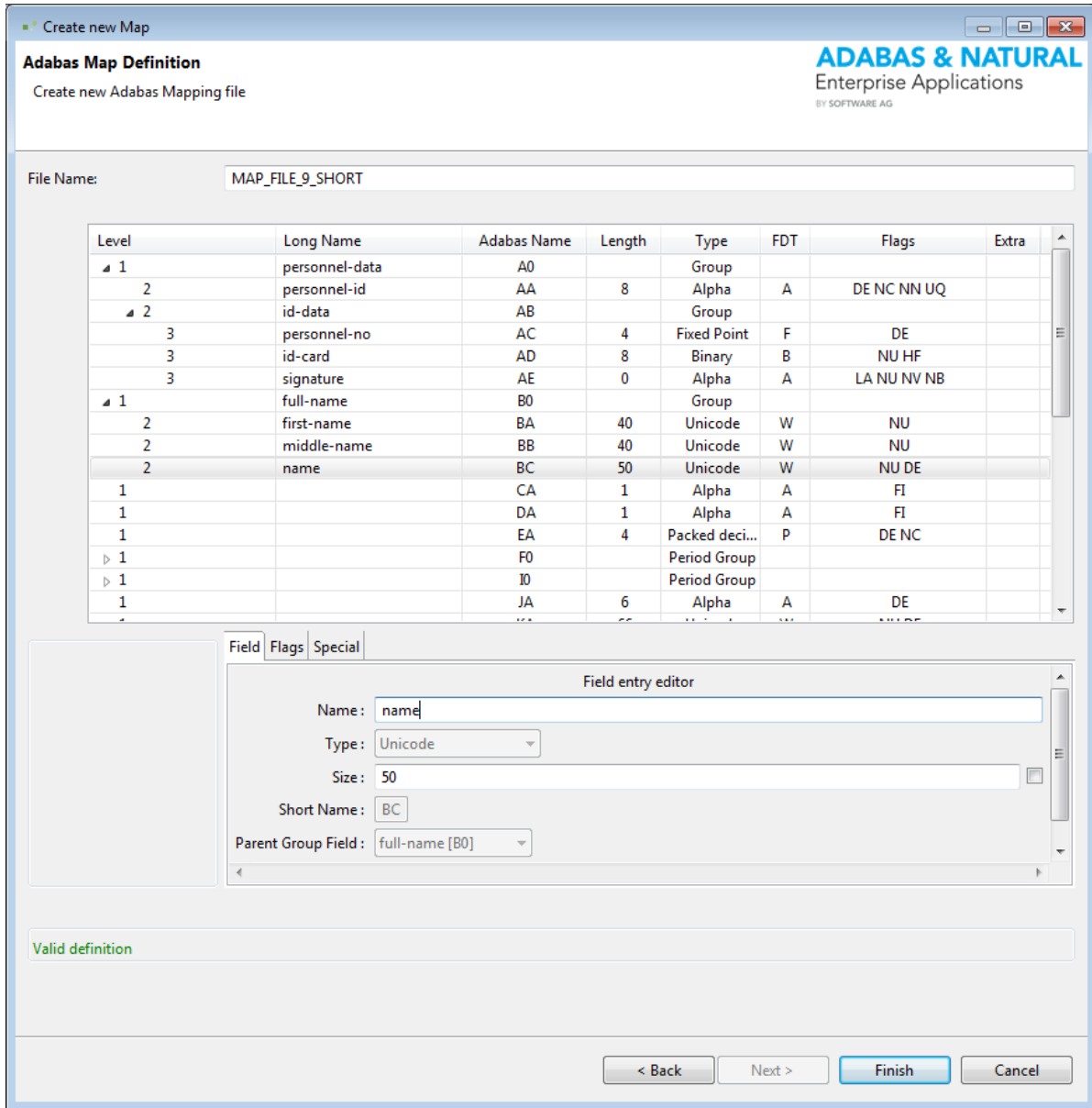
< Back Next > Finish Cancel



Notes:

1. The entry in the field `File Name` must be unique.
2. Most of the definitions cannot be changed because an Adabas file definition cannot be changed dynamically.

The dialog for creating a so-called free hand map for an existing Adabas file is similar to the one shown above.



Click on the button **Finish** to complete the map definition.

Browsing Adabas Data with Maps

Select the database and file specified for the maps and double click, or open the Data Browser via the context menu. All fields that are defined in the map with long names are shown, and can be used for browsing the data.

Map Definition and Data

Map : MAP_FILE_9_SHORT

Data Location: 4 [EXAMPLES_2] Map Location: 4 File: 10
Number of records: 1272 Created:
ISN reusage: enabled Space reusage: enabled
Program refresh: disabled Ciphering: disabled

Filter Fields :

Field	Level	Adabas Name	Length	Type	Flags	Content Type	Extras
<input checked="" type="checkbox"/> personnel-data	1	A0		Group			
<input checked="" type="checkbox"/> personnel-id	2	AA	8	Alpha	Descriptor, Null...		
<input checked="" type="checkbox"/> id-data	2	AB		Group			
<input checked="" type="checkbox"/> personnel-nc	3	AC	4	Fixed Point	Descriptor		
<input checked="" type="checkbox"/> id-card	3	AD	8	Binary	Null Value Sup...		
<input checked="" type="checkbox"/> signature	3	AE	0	Alpha	Long, Null Val...		
<input checked="" type="checkbox"/> full-name	1	B0		Group			
<input checked="" type="checkbox"/> first-name	2	BA	40	Unicode	Null Value Sup...		
<input checked="" type="checkbox"/> middle-name	2	BB	40	Unicode	Null Value Sup...		
<input checked="" type="checkbox"/> last-name	2	BC	50	Unicode	Null Value Sup...		

Adabas Query

Start Offset: 1 Number of records to be read: 20

Filter: in

ISN	A0:personnel-id	A0:AB:personn...	A0:AB:id-card	A0:AB:signature	B0:first-name	B0:middle-name	B0:last-name
1	50005800	0	0		Simone		Adam
2	50005600	0	0		Humberto		Moreno
3	50005500	0	0		AlexAndré		Blond
4	50005300	0	0		Elisabeth		Maizière
5	50004900	0	0		Albert		Caoudal
6	50004600	0	0		Bernard		Verdie
7	50004300	0	0		Michele		Guerin
8	50004200	0	0		Bernard		Vauzelle
9	50004100	0	0		Robert		Chapuis
10	50004000	0	0		Jean		Montassier
11	50003800	0	0		Daniel		Jousselin
12	50006900	0	0		Patrick		Baillet
13	50007600	0	0		Jean-Marie		Marx
14	50003700	0	0		Louis		D'Agostino

Console

```

Jan 18, 2016 15:28:15 CET: Console listener started
Jan 18, 2016 15:28:15 CET: Register database 3(tcpip://PCBAL05:0)
Jan 18, 2016 15:28:15 CET: Register database 4(tcpip://PCBAL05:0)
Jan 18, 2016 15:28:15 CET: Open Database 3@PCBAL05:0

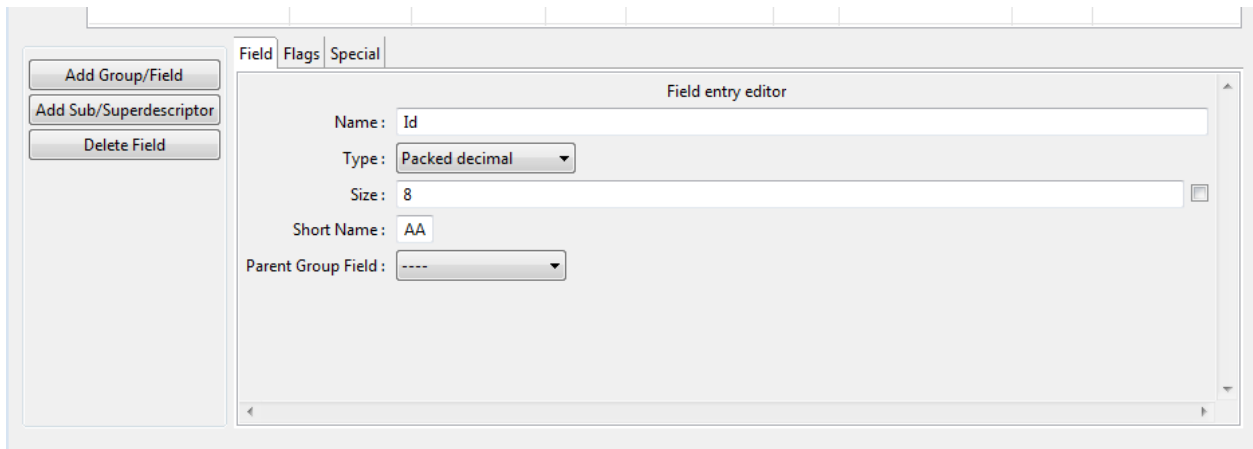
```

Creating a new Adabas File

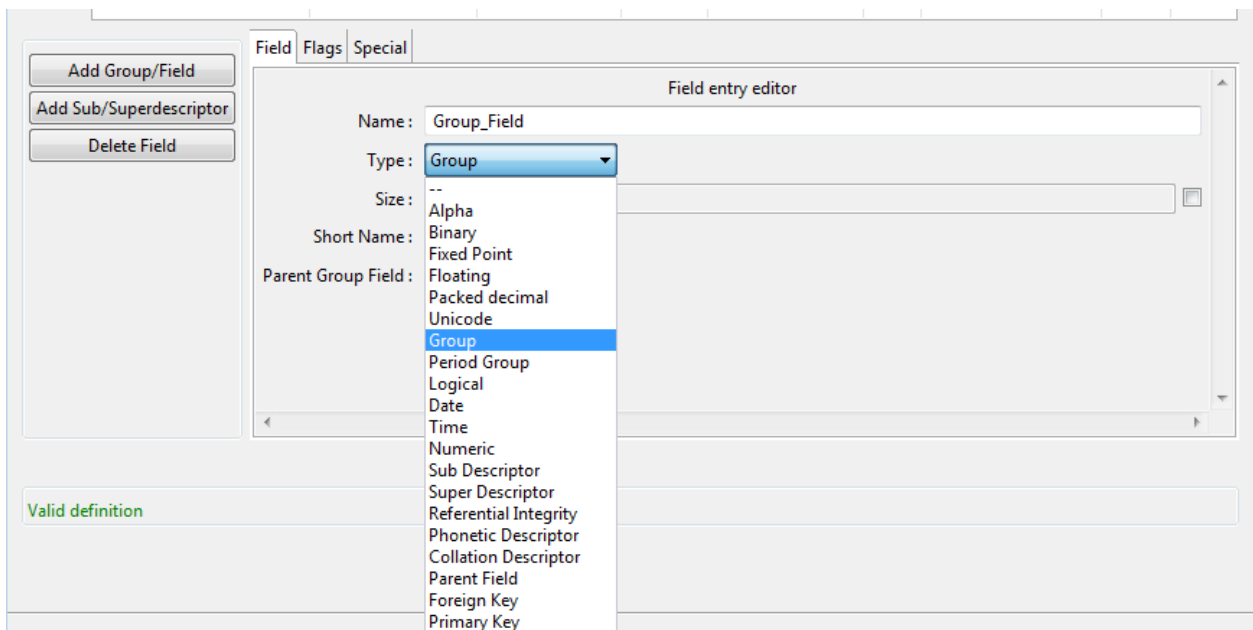
There are two ways in which you can create a new Adabas file with the Data Designer:

- Choose **Create a new free hand Adabas file and Map without reference** from the **New Map** dialog;
- Import a file definition from an existing file, such as an XML schema or an Adabas FDT file. Choose **Import file** or **new->file** from the context menu.

Click the **Add Group/Field** button to add fields to the FDT, and a default entry for the field will be added. All types and options can be changed in the **Field entry editor**:



To add a group or periodic group, choose the appropriate type from the dialog and then add the fields to the group.



Choose the appropriate parent field from the drop down box Parent Group Field. Existing fields can be changed to be part of a group.

Field entry editor

Name: Group_Member

Type: Alpha

Size: 10

Short Name: AC

Parent Group Field: Group_Field [AB]

Flags

- Descriptor(DE)
- Null not allowed(NN)
- Fixed storage(FI)
- Use creation Time in System generated field(CR)
- Delete Cascade(DC)
- Update no action(UX)
- Update set NULL(UN)
- Null value suppression(NU)
- SQL Null-Value Representation(NC)
- Unique(UQ)
- Multiple(MU)
- No Value Conversion(NV)
- Delete no action(DX)
- Delete set NULL(DN)
- Update Cascade(UC)

Special

Configure Charset and Date Time definition

Charset: US-ASCII

Date/Time (DT): No Date definition

TZ: Local Time Zone

System generated SY: No system generated definition

CR: Creation time

To add a sub- or super descriptor, click the **Add a Sub/Superdescriptor** button. Select the field that should be added and specify the length and click the **Add** button.

Note: It is not possible to modify fields that have already been added. In order to change the descriptor, it is necessary to cancel the dialog first and then add the descriptor again.

Add Sub/Super Descriptor

This is the Dialog for adding a sub/super descriptor

Add Descriptor

Long Name Short Name

Level	Long Name	Short Name	Length	Type
1	Id	AA	8	Packed decimal
▲ 1	Group_Field	AB		Group
2	Group_Member	AC	10	Alpha

Select Subfield: AC From To

Level	Long Name	Short Name	Length	Type
▲ 1	Super_1	AD	8	Sub Descriptor
2	Id	AA	1-8	Packed decimal

Create new Map
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Adabas Map Definition
Create new Adabas Mapping file

File Name:

Level	Long Name	Adabas Name	Length	Type	FDT	Flags	Extra
1	Id	AA	8	Packed decimal	P	NU DE UQ	
▲ 1	Group_Field	AB		Group			
2	Group_Member	AC	10	Alpha	A	NU	
▲ 1	Super_1	AD	14	Super Descriptor		NU DE	
2	Id	AA	1-8	Packed decimal	P	NU DE UQ	
2	Group_Member	AC	5-10	Alpha	A	NU	

Add Group/Field
Field
Flags
Special

Field entry editor

Name:

Type:

Size:

Short Name:

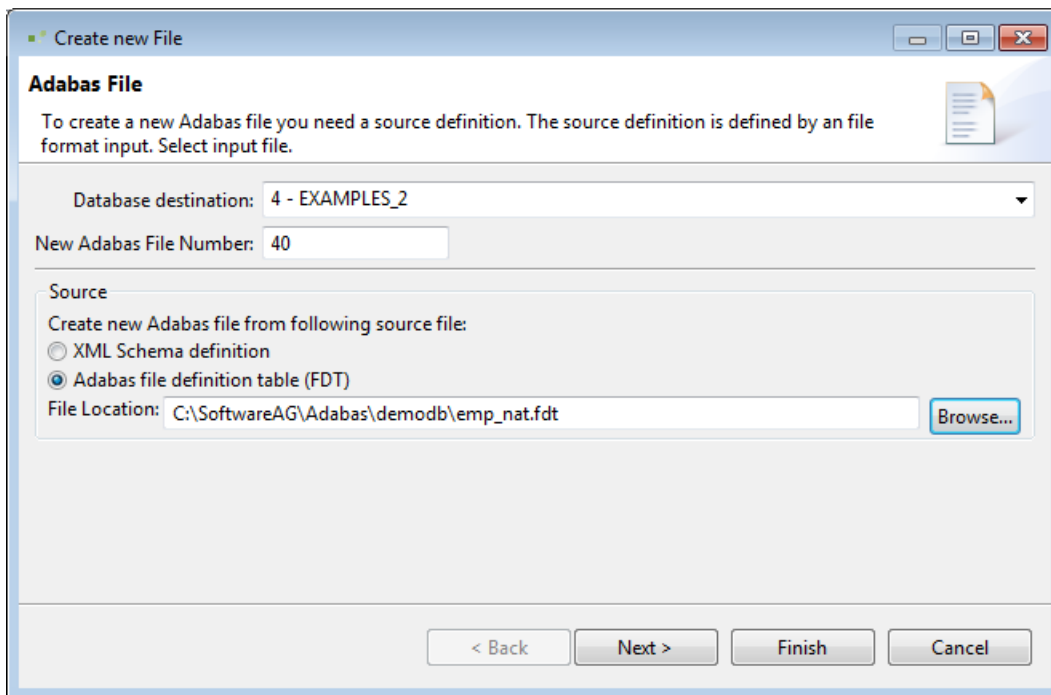
Parent Group Field:

Field is part of a sub/super descriptor, editing disabled

Create a new Adabas File and Map from an existing Definition

This new file dialog supports two different file formats to load a definition from a file and create a new Adabas file with the corresponding map definitions:

- An Adabas ADAFDU input file;
- An XML schema file.



The next dialog shows all fields and can be used to change the field definitions as required.

Create new File

Adbas File
Display Definitions for the new File on Database "4 - EXAMPLES_2"

Filename: EMPLOYEES-NEW

Level	ID	Format	Length	Options	Name
1	AA	A	8	DE UQ	personnel-id
1	AB				full-name
2	AC	A	20	NU	first-name
2	AE	A	20	DE	name
2	AD	A	20	NU	middle-name
1	AF	A	1	FI	mar-stat
1	AG	A	1	FI	sex
1	AH	P	4	DE NC	birth
1	A1				full-address
2	AI	A	20	NU MU	address-line
2	AJ	A	20	NU DE	city
2	AK	A	10	NU	post-code
2	AL	A	3	NU	country

LEVEL: 2
 FIELD_NAME: AK LENGTH: 10
 LONG_NAME: post-code
 FORMAT: Alphanumeric (A)
 FLAGS: Multiple fields(MU) Period group(PE)
 Fixed storage length(FI) Data compression(NU) SQL null value(NC) No SQL null(NN)
 Descriptor(DE) Unique(UQ) No index(XI)
 Long alpha(LA) Large Object(LB) Encoding conversion(NV) Blank compression(NB)

< Back Next > Finish Cancel

Create new File

Adabas File

Enter Mapping and LOB File information for the new File on Database "4 - EXAMPLES_2"

Mapping

Create Map Definitions

Map Database: 200 - MAPPING_DATABASE

Map File Number: 1000

QUERYCONFIG File found.

LOB File

Create LOB File

LOB File Number: 5

LOB File Name: LOBFILE_of_4

< Back Next > Finish Cancel

Choose whether to create a map definition and where to store it.

