

Adabas Client for Java

Adabas Data Designer

Version 2.0.1

October 2018

This document applies to Adabas Client for Java Version 2.0.1 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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Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
Monospace font	Identifies service names and locations in the format <i>folder.subfolder.service</i> , APIs, Java classes, methods, properties.
<i>Italic</i>	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
Monospace font	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the symbol.
[]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

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Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

2 Adabas Data Designer

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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

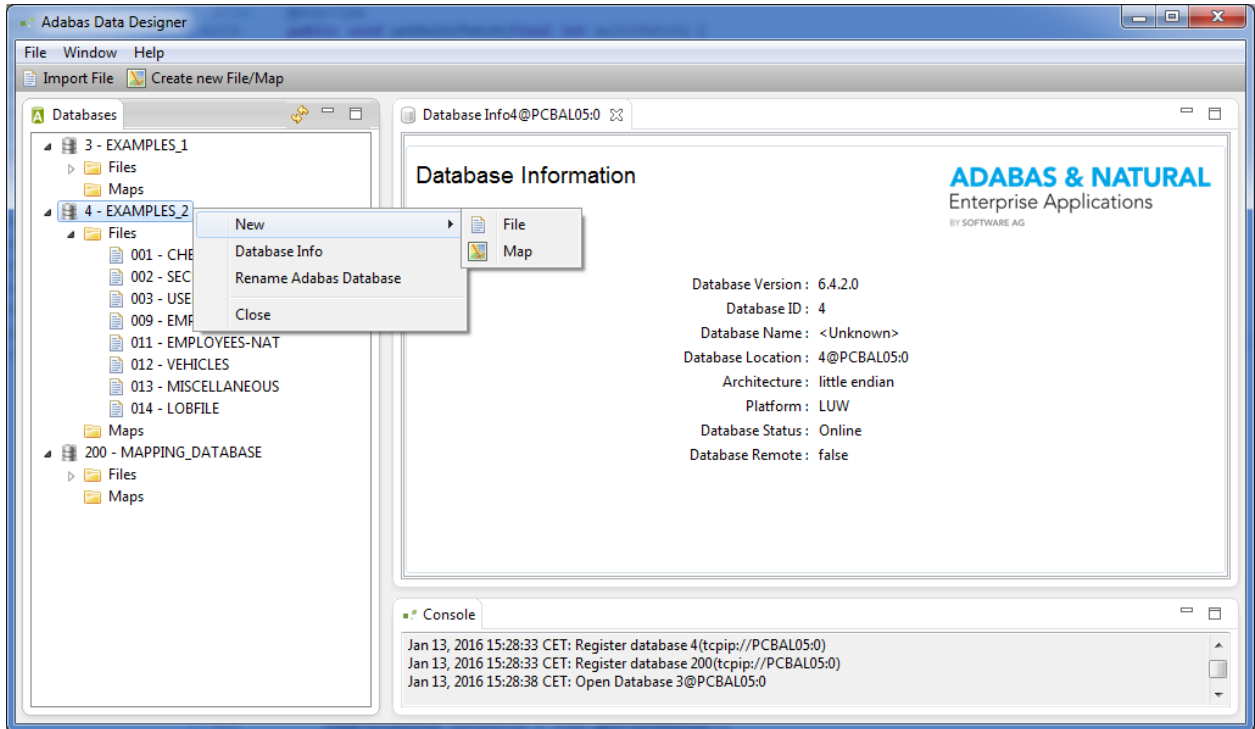
The Data Designer is a Java rich client and uses Java 8 technology. The required Java 8 runtime environment will be installed by the Software AG Installer. Please ensure that you set the correct environment e.g. by sourcing the "sagenv.new" file from the bin subdirectory of your installation, before 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.

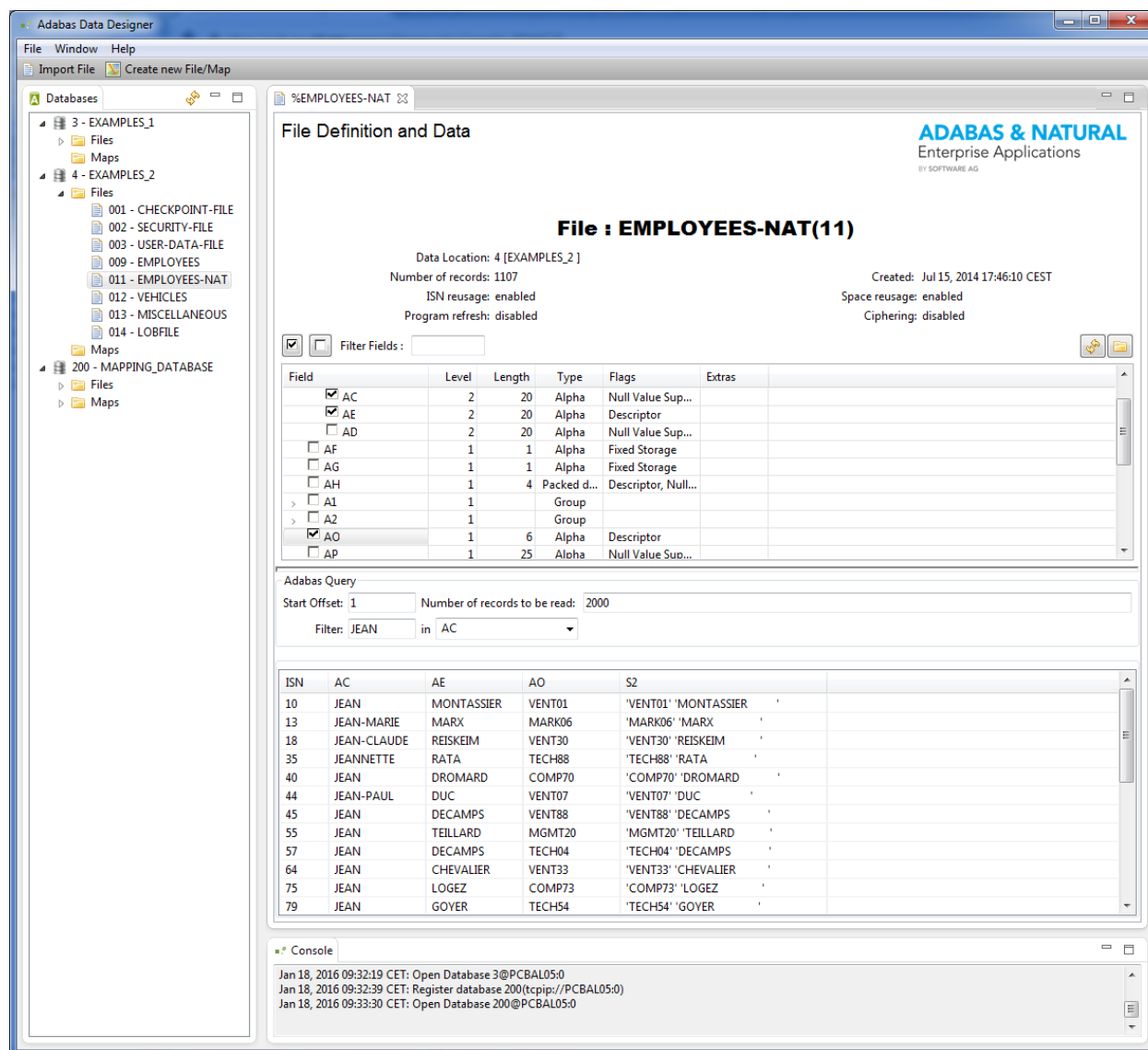
Database Information

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:

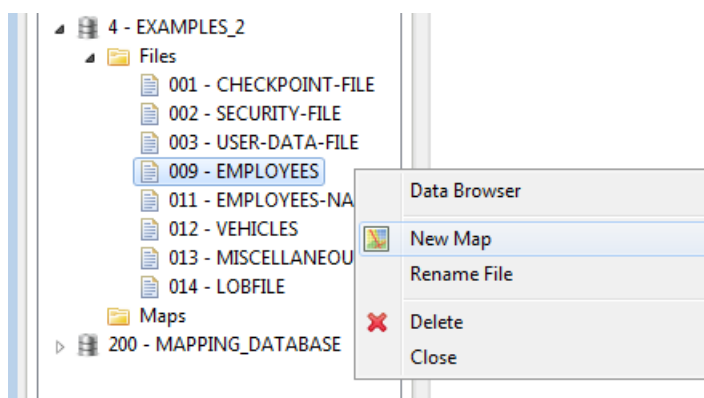
1. Create a map file definition for an existing Adabas file already loaded into the database:
 - a. Add map definitions by hand;
 - b. Load definitions from an external file.
2. Create a map definition in combination with a new Adabas file definition table:
 - a. Add map and field definitions by hand;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

Create new Map

Adabas Map Creation
This wizard helps to create a new Adabas file and/or a Map/Catalog definition.

Source

- ☐ Create new free hand Adabas file and Map without reference
- ☐ Create new free hand Map for an existing Adabas file
- Create Map definition for an existing Adabas file from a given reference definition:
 - ☒ Use Adabas file definition table (FDT) comments
 - ☐ Natural DDM out of SYSTRANS transfer format file exported with SYSOBJH:

File Name:

Database file containing the Data
The map references an Adabas file. This Adabas file contains the data itself.

Database:

File Number:

Adabas Mapping data are stored into

Map Database:

Map File Number:

Map configuration File found.

Hint
Need more hints ? Please hover your mouse over this element.

- A free hand new definition can be created or a source definition can be specified. Either select an input file or go further defining your own definition.
- XSD input definitions cannot be mapped on existing Adabas files.
- The file mis.fdt in the Adabas folder demodb does not contain any long names for fields, consequently the "Finish" button is not activated.

Status

< Back Next > **Finish** Cancel

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

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.

Create new Map

Adabas Map Definition
Create new Adabas Mapping file

File Name:

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		CA	1	Alpha	A	FI	
1		DA	1	Alpha	A	FI	
1		EA	4	Packed deci...	P	DE NC	
1		F0		Period Group			
1		J0		Period Group			
1		JA	6	Alpha	A	DE	

Field entry editor

Name:

Type:

Size:

Short Name:

Parent Group Field:

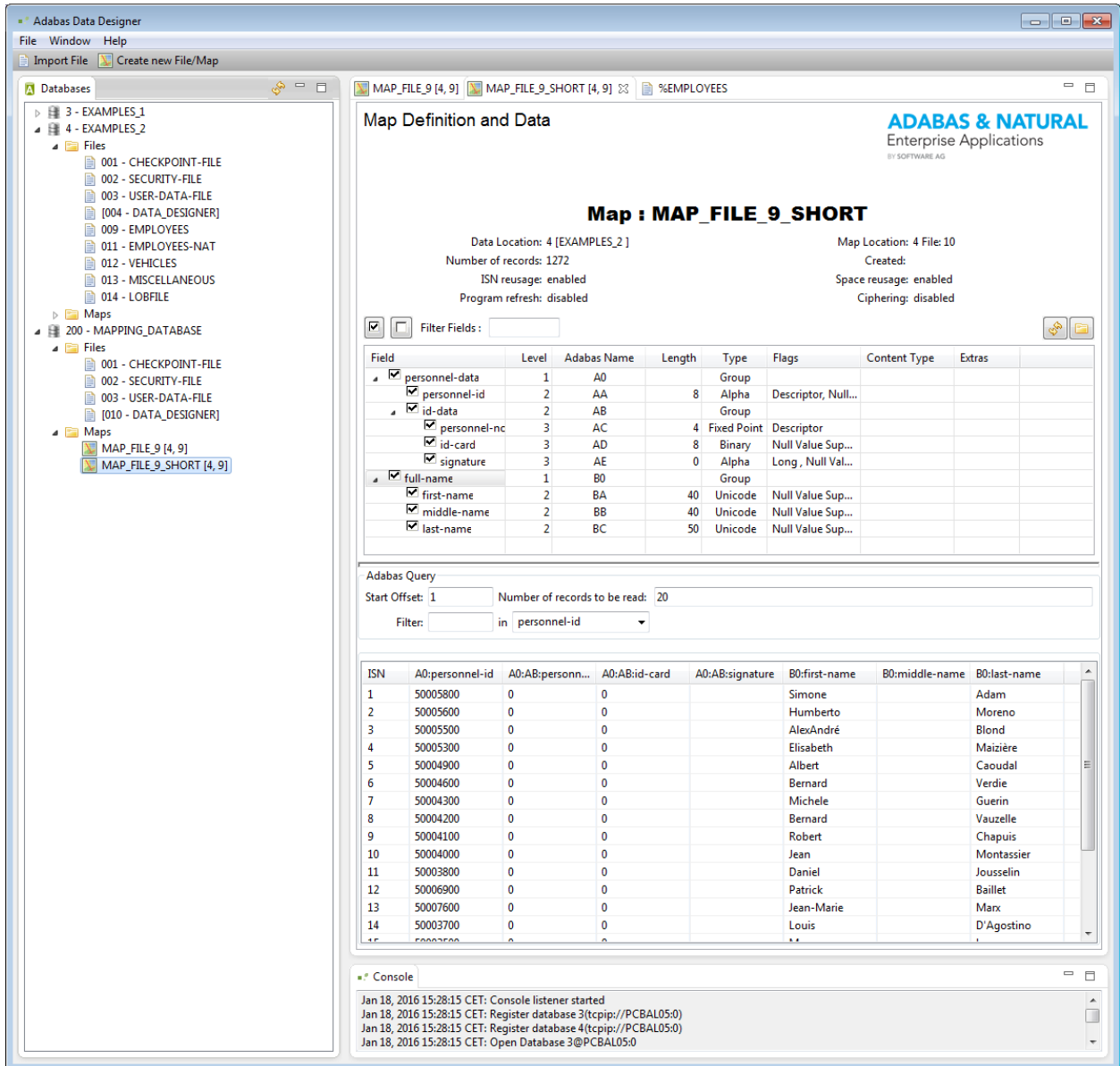
Valid definition

< Back Next > Finish Cancel

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.



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.

Free Hand Adabas File and Map

You can use the following dialog to create a new FDT and the related mapping.

[illegible]

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**:

The screenshot shows the 'Field entry editor' dialog box with the 'Field' tab active. The left sidebar contains three buttons: 'Add Group/Field', 'Add Sub/Superdescriptor', and 'Delete Field'. The main area contains the following fields:

- Name: Id
- Type: Packed decimal (dropdown menu)
- Size: 8
- Short Name: AA
- Parent Group Field: ---- (dropdown menu)

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

The screenshot shows the 'Field entry editor' dialog box with the 'Field' tab active. The left sidebar contains three buttons: 'Add Group/Field', 'Add Sub/Superdescriptor', and 'Delete Field'. The main area contains the following fields:

- Name: Group_Field
- Type: Group (dropdown menu is open, showing a list of options including Alpha, Binary, Fixed Point, Floating, Packed decimal, Unicode, Group, Period Group, Logical, Date, Time, Numeric, Sub Descriptor, Super Descriptor, Referential Integrity, Phonetic Descriptor, Collation Descriptor, Parent Field, Foreign Key, and Primary Key. 'Group' is highlighted.)
- Size: --
- Short Name:
- Parent Group Field:

At the bottom left, there is a green text label: 'Valid definition'.

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

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

Adabas Map Definition
Create new Adabas Mapping file

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File Name: MAP_FILE_9_FREE

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	

up
down

Add Group/Field
Add Sub/Superdescriptor
Delete Field

Field entry editor

Name: Group_Member
Type: Alpha
Size: 10
Short Name: AC
Parent Group Field: Group_Field [AB]

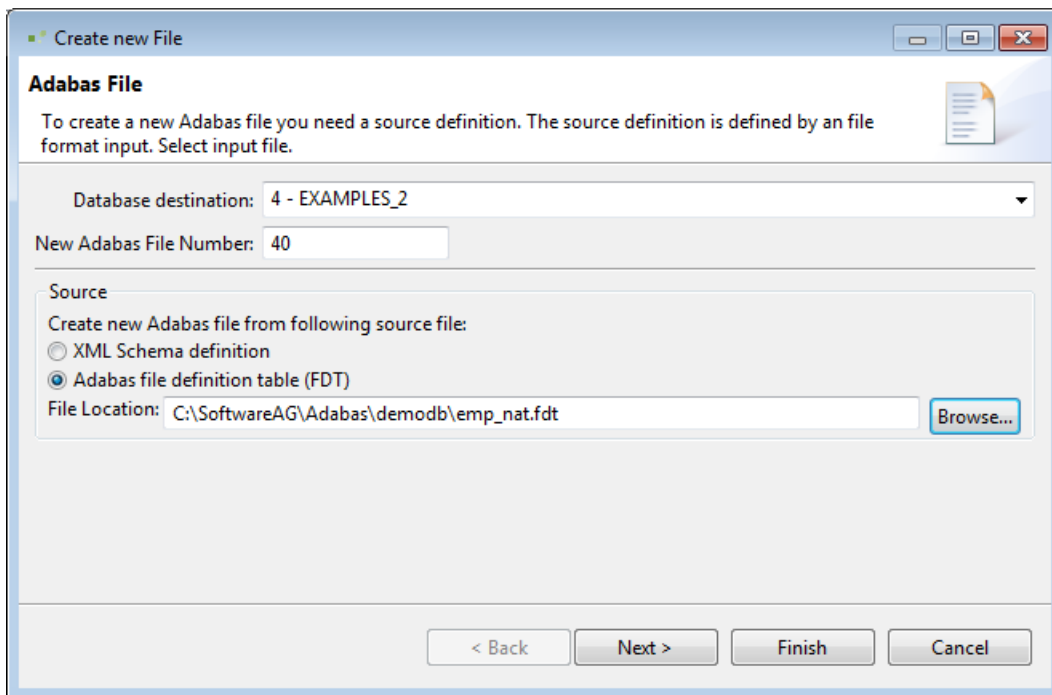
Field is part of a sub/super descriptor, editing disabled

< Back Next > Finish Cancel

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

Adabas 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.

