

Event Replicator Administration

Using the Data Mapping Tool

Version 2.6.1

June 2014

This document applies to Event Replicator Administration Version 2.6.1.

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 document describes how to use the Data Mapping Tool to generate a global format buffer (GFB) and field table (GFFT) for use with the Event Replicator and the Event Replicator Target Adapter.



Note: You can also use the Event Replicator Administration with Predict to generate GFBs and the associated field table. For more information, read *Maintaining GFB Definitions*, in the *Event Replicator Administration User's Guide*.

This document covers the following topics:

<i>Data Mapping Tool Release Notes</i>	Describes changes made to the Data Mapping Tool in this release.
<i>Overview</i>	Provides an overview of the Data Mapping Tool.
<i>Platform Coverage and Prerequisites</i>	Describes system requirements to use the Data Mapping Tool.
<i>Installing the Data Mapping Tool</i>	Describes how to install the Data Mapping Tool.
<i>Data Mapping Tool User Interface and Mechanics</i>	Describes the Data Mapping Tool interface as well as how to start and shut down the Data Mapping Tool.
<i>Setting the Default Number of Occurrences for MU and PE Fields</i>	Describes how to set the default number of occurrences for MU and PE fields.
<i>Locating and Selecting a Source DDM</i>	Explains how to select a source Natural Data Definition Model (DDM) to use with the Data Mapping Tool.
<i>Flattening Fields for Replication</i>	Describes how to request that MU and PE fields be flattened during replication.
<i>Maintaining the Target Relational Database List</i>	Describes how to select and remove target relational database tables from the Data Mapping Tool.
<i>Creating and Maintaining the GFB Schema</i>	Describes how to create a GFB schema, review the GFB schema layout, and remove the schema and user tables from the Data Mapping Tool.
<i>Generating the GFB and Field Table</i>	Describes how to generate an Event Replicator for Adabas global format buffer (GFB) and corresponding field table from a GFB schema in the Data Mapping Tool.
<i>Managing Logging and Log Files</i>	Describes the log files produced by the Data Mapping Tool and their location.

1 Data Mapping Tool Release Notes

This release of the Data Mapping Tool has been rewritten in Java and Eclipse. In addition, the following enhancements and changes have been introduced:

- Data is now stored in local XML files.
- RDBMS tables are no longer created during the DDM drag-and-drop operation. GFB schemas can be changed, columns renamed or deleted; even whole MU/PE subtables can be removed from the field table (GFFT). The RDBMS tables are only created by the Event Replicator Target Adapter during the actual data replication.
- The GFB schema name you specify when you create the schema will now be used for the resulting RDBMS table name. Once you have created a GFB schema for a relational database from a DDM, you can rename it and the fields within the schema. These updates will be reflected in the table and columns names of the RDBMS table.

For more information about renaming schemas and schema fields, read [Renaming Schemas](#) and [Renaming Schema Fields](#), elsewhere in this guide.

- You can now drag and drop single fields from a DDM onto existing RDBMS columns to create or modify a GFB schema that maps data to existing RDBMS tables.

For more information about dragging and dropping individual fields, read [Creating the Schema from Individual Fields in the DDM](#), elsewhere in this guide.

- Once you have created a GFB schema for a relational database from a DDM, you can redefine (split) fields within the schema. This allows the data in the field to be redefined over more than one column in the resulting RDBMS table.



Note: Attempts to redefine schema fields require that Event Replicator for Adabas 3.2.1 be installed and in use at your site.

For more information about redefining fields in a GFB schema, read [Redefining Schema Fields](#), elsewhere in this guide.

- Once you have created a GFB schema for a relational database from a DDM, you can change the primary key for a table. In addition, you can create a composite key from one or more fields in the schema.



Note: Attempts to create composite keys require that Event Replicator for Adabas 3.2.1 be installed and in use at your site.

For more information about creating composite keys in a GFB schema, read [Specifying Keys](#), elsewhere in this guide.

- When creating the GFB schema, the values for the **RDBMS Format** field have changed to match those generated for the Event Replicator Target Adapter. For example, the value "A - Alphanumeric" now appears as "S - String".
- When generating the GFB and field table, the statistics shown for (MU) fields have changed. The statistics now show the ending occurrence number instead of the number of occurrences.



Note: Support for 32-bit Linux operating systems will be dropped in a future version.

2 Overview

The Data Mapping Tool is a graphical user interface that allows you to generate a global format buffer (GFB) and field table (GFFT). Using the interface you can drag and drop a Natural *data definition module (DDM)* onto a target RDBMS, adjust the resulting GFB schema, and generate the GFB and GFFT. In addition, you can drag and drop individual fields from a DDM onto existing RDBMS columns to create or modify a GFB schema that maps data to existing RDBMS tables.

Natural DDMs provide a logical definition of a physical database and can be generated using Natural's SYSDDM utility or from Predict. DDMs allow convenient and transparent access of the Adabas data to different database management systems. For each physical file in a database, one or more DDMs can be defined. For complete information on generating a Natural DDM, refer to your Natural or Predict documentation.



Note: You can also use the Event Replicator Administration with Predict to generate GFBs and the associated GFFT. For more information, read *Maintaining GFB Definitions*, in the *Event Replicator Administration User's Guide*.

3 Platform Coverage and Prerequisites

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- Prerequisites 6



Note: We recommend that you read the *install.txt* file in the CD root directory for last-minute information regarding the installation of Adabas Manager and its subcomponents. We also recommend that you read the Adabas Manager and Data Mapping Tool Readme files for last-minute information regarding the operation of Adabas Manager and the Data Mapping Tool. The Data Mapping Tool Readme file can be found in the *Program Files\Software AG\Adabas Manager n.n.n\MappingTool* directory on Windows systems and in the *\$SAG/ama/vnn/MappingTool* directory on UNIX systems after Adabas Manager is installed (where *n.n.n* and *nn* represent the version number of Adabas Manager).

Supported Operating Systems

The complete list of operating systems supported by the Data Mapping Tool is provided in the Adabas Manager *readme.txt* file, found in the root directory on the installation CD.

UNIX and LINUX installations require an X-Windows graphical environment to run the Data Mapping Tool.

Supplied Third-Party Software

JRE 1.6.0_07 is automatically installed with the Data Mapping Tool (this version of Java is required for this version of the Data Mapping Tool).

Prerequisites



Note: JRE 1.6.0_07, bundled with the Data Mapping Tool, is required for this version of the Data Mapping Tool. It is also included in the Data Mapping Tool installation kit.

- A data definition module (DDM) of your Adabas database must be generated from Software AG's Natural or Predict products. For more information, read your Natural or Predict documentation. A sample DDM of the Adabas Employees demo file is included in the Data Mapping Tool installation.
- Java Database Connectivity (JDBC) drivers are required to communicate with an RDBMS to display existing table and column information in the Data Mapping Tool's middle pane. However, it is possible to use the Data Mapping Tool without communicating with an RDBMS. The following table lists the relational databases supported by the Data Mapping Tool as well as the required JDBC drivers for each.

RDBMS Support	Required JDBC Driver
DB2 8.2 Universal Database (open systems), or later	<i>db2jcc.jar</i> <i>db2jcc_license_cu.jar</i>
DB2 Universal Database (UDB) version 8 for z/OS, or later	<i>db2jcc.jar</i> <i>db2jcc_license_cisuz.jar</i>
Microsoft SQL Server 2000 Service Pack 4	<i>msbase.jar</i> <i>mssqlserver.jar</i> <i>msutil.jar</i>
Microsoft SQL Server 2005 or 2008	<i>sqljdbc4.jar</i>
MySQL 5.0.17, or later	<i>mysql-connector-java-v.r.s-bin.jar</i> , where <i>v . r . s</i> represents the MySQL release number.
Oracle Database 10g	<i>classes12.jar</i>
Oracle Database 11g, or later	<i>ojdbc6.jar</i>
Sybase SQL Anywhere 9.0.2, build 3221, or later	<i>jconn2.jar</i>
Sybase ASE 15.01, or later	<i>jconn3.jar</i>
Teradata Version 2 Release 6.01, or later	<i>tdgssconfig.jar</i> <i>tdgssjava.jar</i> (required only for versions prior to version 12) <i>terajdbc4.jar</i>

Download the appropriate JDBC driver files from your relational database vendor or obtain them from an installation package and copy them to the following Data Mapping Tool subdirectory: *plugins/JDBC_Libraries_1.1.1*.

- You must have Event Replicator for Adabas 3.2.1 installed to use the redefines and **composite key** features of the Data Mapping Tool.
- UNIX and LINUX installations require an X-Windows graphical environment to run the Data Mapping Tool.

4 Installing the Data Mapping Tool

The Data Mapping Tool is installed when Adabas Manager and Event Replicator Administration are installed. For more information about installing Adabas Manager and Event Replicator Administration, read *Installing Adabas Manager*.

The default installation directory is a *Mapping Tool* directory wherever Adabas Manager program files are installed.

If you have installed the Data Mapping Tool in a Windows Vista environment and intend to share the Data Mapping Tool and its mapping data with multiple users, you must perform some configuration steps for the Data Mapping Tool prior to using it. These steps move the shared data files to the Vista public data area *C:\Users\Public* and create a modified copy of the Data Mapping Tool's configuration file to point to them.

▶ **The Windows Vista configuration steps you must perform are:**

- 1 Make sure that you are logged on as an administrator on the machine where the Data Mapping Tool is installed.
- 2 Copy the following Data Mapping Tool subdirectories to *C:\Users\Public\MappingTool*:
 - *data*
 - *systrans*
 - *logs*
- 3 Locate the *MT-Config.xml* file wherever the Adabas Manager, Event Replicator Administration, and Data Mapping Tool program files are installed.
- 4 Copy the *MT-Config.xml* file to a location outside of the *C:\Program Files* directory. Windows Vista does not allow files in the *C:\Program Files* directory structure to be edited.
- 5 Delete the original *MT-Config.xml* file from its installed *C:\Program Files* location, wherever you found it in Step 2.

- 6 Edit the copy of the *MT-Config.xml* file using any text editor. Change the `</MappingFilePath>`, `</DDMFilePath>`, and `</LoggingFilePath>` entities in the *MT-Config.xml* file, so that they direct mapping data files and specifications to the path *C:/Users/Public*, as shown below.

```
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
- <MTConfig>
  <MappingFilePath value="C:/Users/Public/MappingTool/data" />
  <DDMFilePath value="C:/Users/Public/MappingTool/systrans" />
  <DDMFileExtensions value=".systrans;.ddm" />
  <LoggingFilePath value="C:/Users/Public/MappingTool/logs" />
  <LogLevel value="DEBUG" />
  <DefaultOccurrences value="5" />
</MTConfig>
```

- 7 Save the edits you have made and copy the file back to its original installed location in *C:\Program Files*, wherever you found it in Step 2.

Multiple users should now be able to use the Data Mapping Tool and share its mapped data.

5 Data Mapping Tool User Interface and Mechanics

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- The Data Mapping Tool Interface 14

This chapter describes how to start and shut down the Data Mapping Tool and provides an overview of the Data Mapping Tool interface.

Starting the Data Mapping Tool

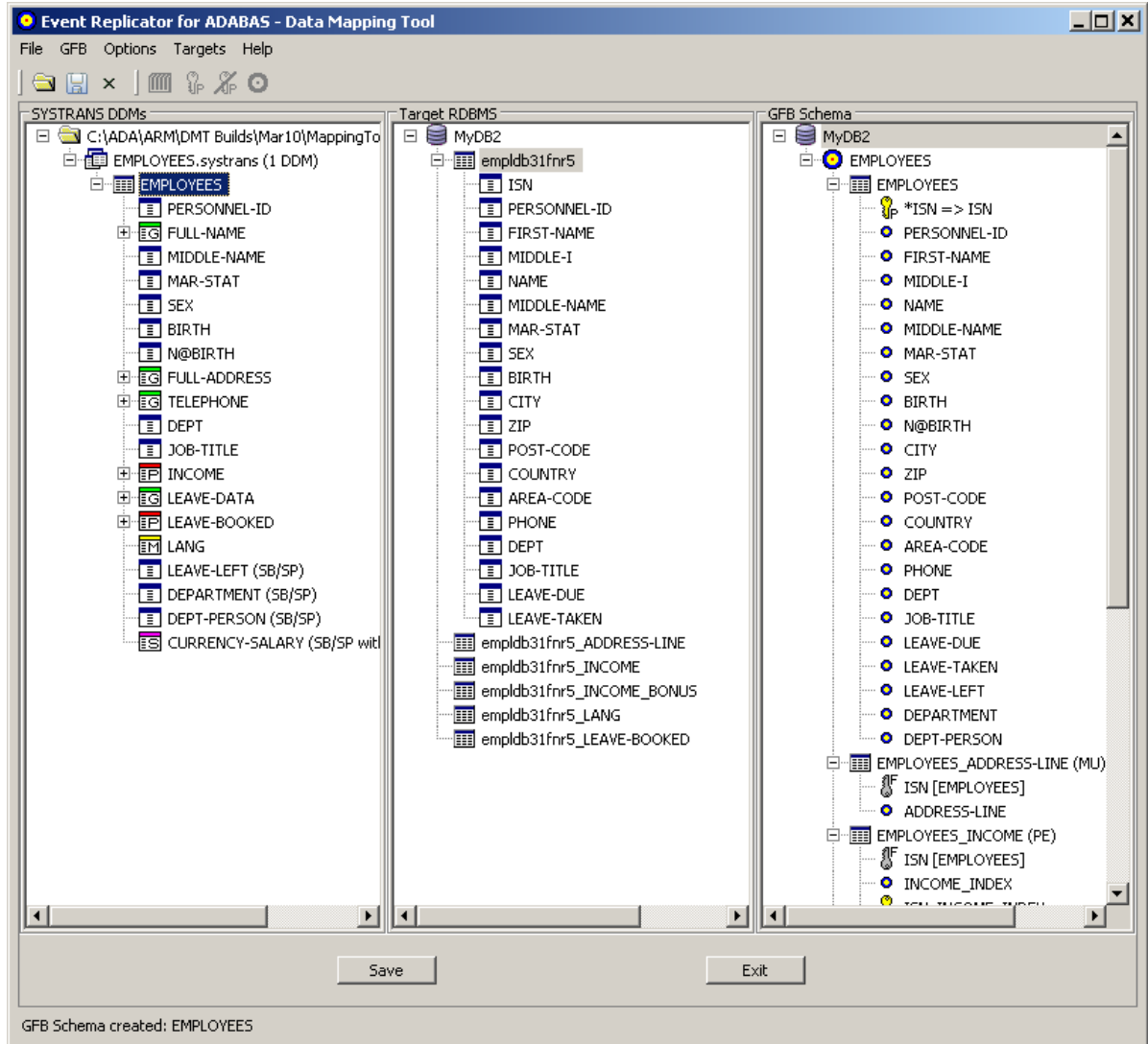
▶ To start the Data Mapping Tool in Windows environments, complete the following steps:

- Select **Data Mapping Tool** from the **Software AG Event Replicator Administration Start Programs** submenu.

Or:

Locate and run the *MappingTool.exe* file in the installation directory.

The Data Mapping Tool starts up and its primary window appears.



▶ To start the Data Mapping Tool in UNIX environments, complete the following steps:

- Run the *MappingTool.sh* file in the installation directory.

The Data Mapping Tool starts up and its primary window appears.

Shutting Down the Data Mapping Tool

▶ To shut down the Data Mapping Tool:

- Click the **Exit** button on the Data Mapping Tool window.

The Data Mapping Tool shuts down.

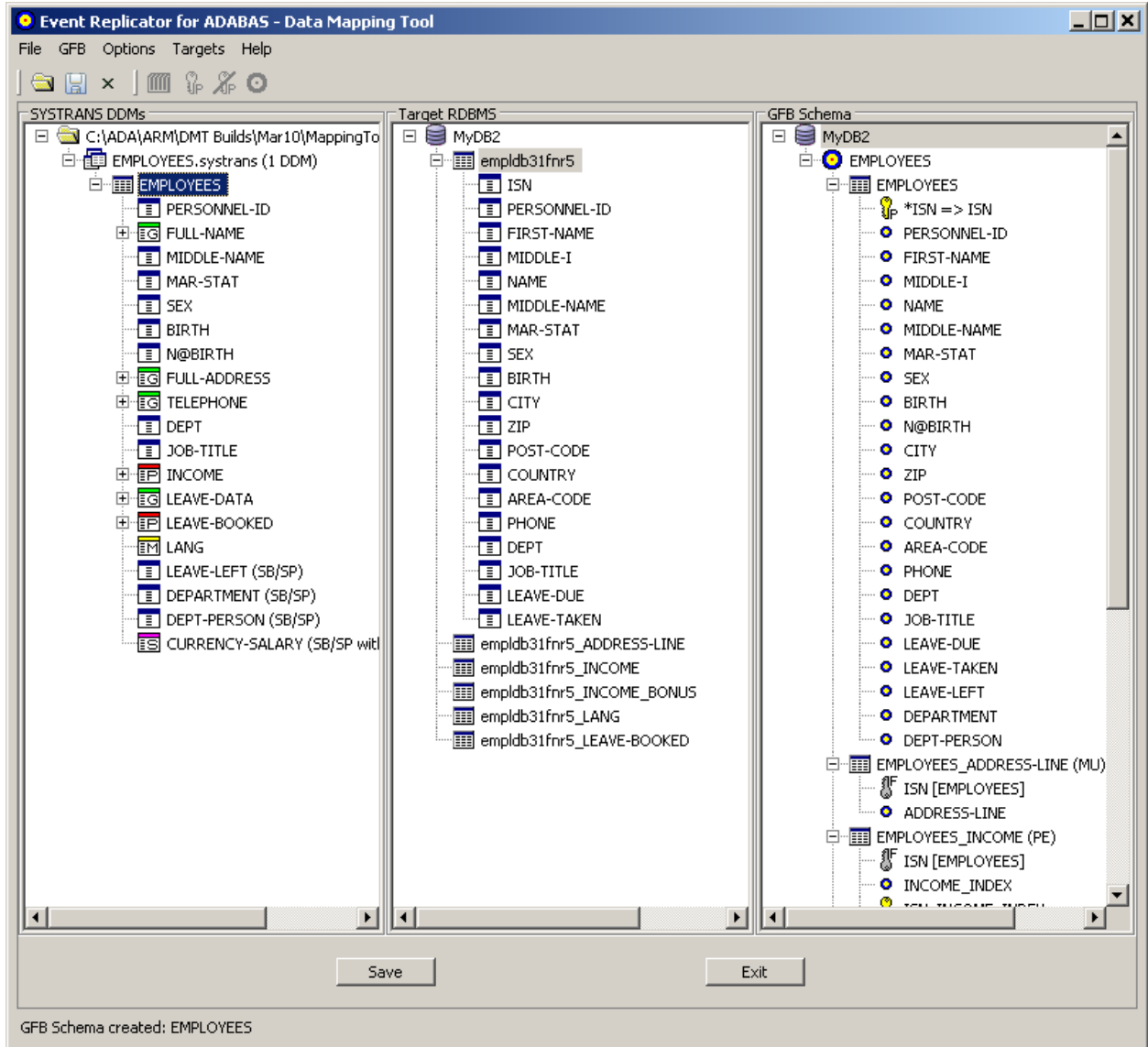
The Data Mapping Tool Interface

This section describes the Data Mapping Tool window, menus, and buttons. It covers the following topics:

- [Data Mapping Tool Main Window](#)
- [Menus](#)
- [Buttons](#)
- [Icons](#)

Data Mapping Tool Main Window

The Data Mapping Tool main window is divided into three columns.



The far left column, **SYSTRANS DDMs**, lists available DDMs. Once you have identified a directory containing DDMs, the DDMs in that directory get listed in this column. For information on identifying the directory containing your DDMs, read [Locating and Selecting a Source DDM](#), elsewhere in this guide.

The middle column, **Target RDBMS**, lists the target relational database tables to which you will map fields from your DDM. To add and remove target relational databases from this list, read [Adding a Target Database](#), elsewhere in this guide.

The right column, **GFB Schema**, displays the GFB schema that is created when you drag a DDM onto an RDBMS. A GFB and field table (GFFT) can be generated from this schema.

Menus

The Data Mapping Tool main window includes five menus. The options available from these menus are described in this section:

- File Menu
- GFB Menu
- Options Menu
- Targets Menu
- Help Menu

File Menu

The **File** menu consists of the following menu options:

Menu Option	Description
Find SYSTRANS DDM Directory...	Allows you to specify the directory in which data definition modules (DDMs) can be found. For more information, read Locating and Selecting a Source DDM , elsewhere in this guide.
Save Mapping	Allows you to save the RDBMS target table and GFB schema listed on the screen. The next time you start up the Data Mapping Tool, this table and GFB schema will automatically appear.
Exit	Allows you to shut down the Data Mapping Tool.

GFB Menu

The options on the **GFB** menu only become available once a GFB schema appears in the GFB Schema column of the screen. It consists of the following menu options:

Menu Option	Description
Redefine	Allows you to redefine a field in the schema. For more information, read Redefining Schema Fields , elsewhere in this guide.
Set Primary Key	Allows you to specify that a field selected in the schema is the primary key or is part of a composite key. For more information, read Specifying Keys , elsewhere in this guide.
Remove Primary Key	Allows you to specify that a field selected in the schema is no longer the primary key or part of a composite key. For more information, read Specifying Keys , elsewhere in this guide.
Generate GFB/GFFT	Allows you to generate the GFB and field table, based on the selected GFB schema. For more information, read Generating a GFB and Field Table , elsewhere in this guide.

Options Menu

The **Options** menu consists of the following menu options:

Menu Option	Description
Logging Level	Allows you to set the logging level for Data Mapping Tool processing. For more information, read Managing Logging and Log Files , elsewhere in this guide.
Default Occurrences..	Allows you to specify the default number of occurrences of repeating elements for each MU or PE field if you want them to be flattened during replication. When you drag a DDM onto an RDBMS target to create a GFB schema, you are presented with a panel on which you can override this default for each MU or PE field. For more information, read Requesting MU and PE Field Flattening During Replication , elsewhere in this guide
DDM File Extensions..	Allows you to specify the file extensions of the DDMs you want to see in the leftmost column of the Data Mapping Tool main window.

Targets Menu

The **Targets** menu consists of the following menu options:

Menu Option	Description
Add RDBMS Target..	Allows you to add and link to a target RDBMS. Once added, the RDBMS is listed in the middle column of the Data Mapping Tool main window. For more information, read Adding a Target Database , elsewhere in this guide.

Help Menu

The **Help** menu consists of the following menu options:

Menu Option	Description
Help Contents	Allows you to access the online help for the Data Mapping Tool
About Event Replicator for Adabas - Data Mapping Tool	Lists version information about this installation of the Data Mapping Tool.

Buttons

The Data Mapping Tool main window includes the following buttons:



Note: Some of these buttons only become useable if specific items are selected in the Data Mapping Tool screen.
















Button	Description
	Allows you to specify the directory in which data definition modules (DDMs) can be found. For more information, read Locating and Selecting a Source DDM , elsewhere in this guide.
	Saves the current mappings shown in the Data Mapping Tool. Target definitions in the target list, GFB schemas, and source DDMs are saved.
	Exits the Data Mapping Tool.
	Allows you to redefine the selected GFB schema field. For more information, read Redefining Schema Fields , elsewhere in this guide.
	Allows you to specify that a field selected in the schema is the primary key or is part of a composite key. For more information, read Specifying Keys , elsewhere in this guide.
	Allows you to specify that a field selected in the schema is no longer the primary key or part of a composite key. For more information, read Specifying Keys , elsewhere in this guide.
	Allows you to generate the GFB and field table, based on the selected GFB schema. For more information, read Generating a GFB and Field Table , elsewhere in this guide.
	Exits the Data Mapping Tool.
	Saves the current mappings shown in the Data Mapping Tool. Target definitions in the target list, GFB schemas, and source DDMs are saved.














- The **Save** button allows you to save the RDBMS target table and GFB schema listed on the screen. The next time you start up the Data Mapping Tool, this table and GFB schema will automatically appear.
- The **Exit** button allows you to shut down the Data Mapping Tool.

Icons

The Data Mapping Tool main window uses the following icons:

Icon	Description
	Identifies a DDM file in the leftmost pane.
	Identifies a DDM in the leftmost pane, an RDBMS table in the center pane, and a GFB schema table in the rightmost pane. In addition, this icon precedes the Show Tables and Refresh Tables options on the right-click menu of an RDBMS or table in the center pane.

Icon	Description
	Identifies a simple field in the leftmost pane and an RDBMS column in the center pane. In addition, this icon precedes the Show Columns and Refresh Columns List options on the right-click menu of a table in the center pane.
	Identifies a multiple value (MU) field in the leftmost pane.
	Identifies a flattened multiple value (MU) field in the leftmost pane.
	Identifies a periodic group (PE) field in the leftmost pane.
	Identifies a flattened periodic group (PE) field in the leftmost pane.
	Identifies a simple group field in the leftmost pane.
	Identifies a subfield or superfield with occurrences in the leftmost pane.
	Identifies a flattened subfield or superfield with occurrences in the leftmost pane.
	Identifies a subfield or superfield with MU or PE occurrences in the leftmost pane.
	Identifies a flattened subfield or superfield with MU or PE occurrences in the leftmost pane.
	Identifies an RDBMS database in the center and rightmost panes. This icon also precedes the Add RDBMS Target option on the Targets menu.
	Identifies a GFB schema in the rightmost pane. In addition, this icon: <ul style="list-style-type: none"> ■ Precedes the Generate GFB/GFFT option on the right-click menu of a GFB schema in the rightmost pane. ■ Precedes the Generate GFB/GFFT option on the GFB menu. ■ Appears on a button on the main screen that allows you to generate the GFB and field table, based on the selected GFB schema. <p>For more information, read Generating a GFB and Field Table, elsewhere in this guide.</p>
	Identifies a GFB schema field in the rightmost pane.
	Identifies a GFB schema key field -- either the primary key or a field included in a composite key -- in the rightmost pane. In addition, this icon: <ul style="list-style-type: none"> ■ Precedes the Set Primary Key option on the right-click menu of a GFB schema field in the rightmost pane. ■ Precedes the Set Primary Key option on the GFB menu. ■ Appears on a button on the main screen that allows you to identify a GFB schema field as a primary key or composite key field. <p>For more information, read Specifying Keys, elsewhere in this guide.</p>
	Precedes the Set Composite Key Order option on the right-click menu of a GFB schema composite key field in the rightmost pane.

Icon	Description
	Precedes the Remove Primary Key option on the right-click menu of a GFB schema key field in the rightmost pane. This icon also: <ul style="list-style-type: none"> ■ Precedes the Remove Primary Key option on the GFB menu. ■ Appears on a button on the main screen that allows you to specify that a field selected in the schema is no longer the primary key or part of a composite key.
	Identifies a GFB schema foreign key in the rightmost pane.
	Precedes the Flatten option on the right-click menu of a DDM field in the leftmost pane. For more information, read Flattening Fields for Replication , elsewhere in this guide.
	Precedes the Unflatten option on the right-click menu of a DDM field in the leftmost pane. For more information, read Flattening Fields for Replication , elsewhere in this guide.
	Precedes the Rename option on the right-click menu of a GFB schema or GFB schema field in the rightmost pane.
	Precedes the Redefine option on the right-click menu of a GFB schema field in the rightmost pane. This icon also: <ul style="list-style-type: none"> ■ Precedes the Redefine option on the GFB menu. ■ Appears on a button on the main screen that allows you to redefine the selected GFB schema field. For more information, read Redefining Schema Fields , elsewhere in this guide.
	Identifies a child field of a redefined (split) field in the rightmost pane.
	Appears on a button that allows you to save the current mappings shown in the Data Mapping Tool. This icon also precedes the Save Mapping option on the File menu.
	Appears on a button that allows you to specify the directory in which data definition modules (DDMs) can be found. This icon also precedes the Find SYSTRANS DDM Directory option on the File menu.
	Precedes the Properties option on the right-click menu of a screen element.
	Appears on a button that allows you to exit the Data Mapping Tool. This icon also precedes the Exit option on the File menu.
	Precedes the Delete option on the right-click menu of a screen element.
	Precedes the Help Contents option on the Help menu. This option allows you to access the online help for the Data Mapping Tool.

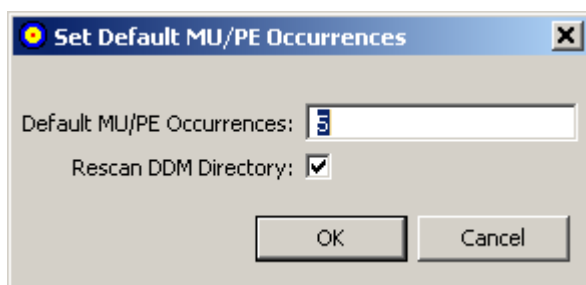
6 Setting the Default Number of Occurrences for MU and PE Fields

When you create a GFB schema, you can specify the number of multiple-value (MU) and periodic group (PE) field occurrences for each MU or PE field in the DDM. However, you can also set a default number of occurrences to be applied to the MU and PE fields prior to creating the GFB schema. This chapter describes how to set this default. You can override this default if you decide to flatten the MU and PE fields in the resulting RDBMS table or when you create the GFB schema using the Data Mapping Tool.

► **To specify the default number of occurrences for MU and PE fields:**

- 1 Select the **Default Occurrences** option on the **Options** menu.

The **Set Default MU/PE Occurrences** window appears.



- 2 In the **Default MU/PE Occurrences** field, specify the *default* number of repeating elements for each MU or PE field that can be expected in the DDM.
- 3 When you have specified a default number of MU and PE field occurrences, select (check) the **Rescan DDM Directory** option. This option will cause the Data Mapping Tool to rescan the DDM directory when you click **OK**, adjusting the MU and PE fields in the listed DDMs to reflect this occurrence setting.

- 4 When the default MU and PE field occurrences are specified and the **Rescan DDM Directory** has been selected, click **OK**.

The Data Mapping Tool main window reappears and the default MU and PE field occurrence setting is applied to all of the fields in the DDMs listed in the leftmost column.

7 Locating and Selecting a Source DDM

▶ To locate and select a source data definition module (DDM), complete the following steps:

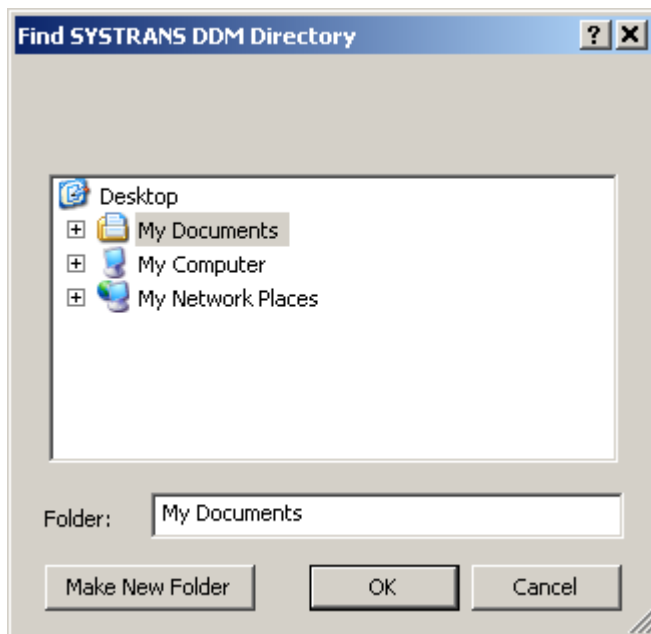
Be sure you have generated and saved a DDM using Software AG's Natural or Predict products.

- 1 Once the Data Mapping Tool is **started**, select the **Find SYSTRANS DDM Directory...** option on the **File** menu.

Or:

Click on the  button.

The **Find SYSTRANS DDM Directory** browsing window appears.

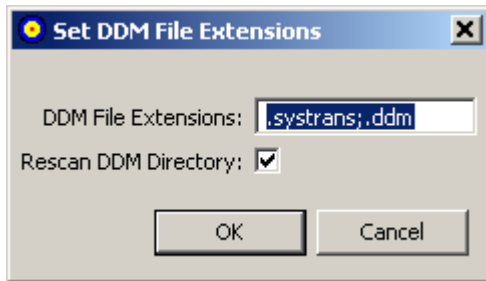


- Using the **Find SYSTRANS DDM Directory** window, locate the directory in which you have stored your previously-generated DDMs. When you have located it click **OK**.

The leftmost **SYSTRANS DDMs** column of the Data Mapping Tool main window displays the directory and may or may not specify any DDMs, depending on the file extensions of the DDM files. If all of your DDMs are shown, you are finished. If only some or none of your DDMs appear, you need to verify that the Data Mapping Tool has the correct list of DDM file extensions assigned, as described in the rest of this procedure.

- Select the **DDM File Extensions** option on the **Options** menu.

The **Set DDM File Extensions** window appears.



- Verify that the **Set DDM File Extensions** window lists all of the file extensions of your available DDMs. Separate the file extension specifications with an semicolon (;).
- When all file extensions are listed, select (check) the **Rescan DDM Directory** option. This option will cause the Data Mapping Tool to rescan the DDM directory you specified when you click **OK**, searching for DDMs with the file extensions you have specified.
- When all file extensions are listed and the **Rescan DDM Directory** has been selected, click **OK**.

The Data Mapping Tool main window reappears and the DDM directory is rescanned for DDMs with the extensions you requested. The leftmost column (**SYSTRANS DDMs**) lists all the DDMs found.

- Scroll through the DDM list and select a DDM in the list by clicking on it to highlight it.

8

Flattening Fields for Replication

- Triggering Field Flattening 26
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By default, when MU and PE fields and subfields and superfields are included in the replicated data, additional tables are created, as described in . However, you can request that individual MU fields, PE fields, subfields, and superfields be *flattened* in the replicated data instead. This process of *flattening* fields will replicate them as columns in the main table, rather than as separate subtables.



If you want to flatten a field in the resulting RDBMS table, you must trigger it in the DDM specification for the field. If you do not explicitly trigger a field to be flattened in DDM, it will not be flattened in the resulting RDBMS tables.




Triggering Field Flattening

To trigger field flattening for a field, you must edit the field in your DDM. This section describes this process.

▶ To trigger field flattening for a field:


- 1 Expand the DDM in the **SYSTRANS DDMs** column of the Data Mapping Tool main window.

DDM files contain one or more DDMs. DDM files are prefixed with the icon ; DDMs are prefixed with the icon .

- 2 Scroll through the fields in the DDM and locate the MU field, PE field, subfield, or superfield for which you want to trigger flattening. MU fields are identified with the  icon, PE fields are identified with the  icon, and subfields and superfields are identified with the  icon.
- 3 Right-click on the field and select **Flatten (Replicate to Columns)** from the drop-down menu.

A **Flatten** dialog appears. For example, the following is a **Flatten** dialog for an MU field.

The **Occurrences** area of the dialog contains two editable fields:




- **Flat Multiple Value (MU) Occurrences** or **Flat Periodic Group (PE) Occurrences**
 - **Flat Multiple Value (MU) Occurrences Start** or **Flat Periodic Group (PE) Occurrences Start**
- 4 Optionally, in the **Flat Multiple Value (MU) Occurrences** or **Flat Periodic Group (PE) Occurrences** field, specify the number of repeating elements for the field. Valid values must be positive integers.
 -  **Note:** A default number is supplied for this field. To specify what this default value should be, read [Specifying the Default Number of MU or PE Occurrences for Flattened Fields](#), elsewhere in this section.
 - 5 Optionally, in the **Flat Multiple Value (MU) Occurrences Start** or **Flat Periodic Group (PE) Occurrences Start** field, specify the starting occurrence number. For example, if you want to start with occurrence 15 rather than occurrence 1 (the default), you would specify "15" here.
 - 6 Click **OK** when finished.

The fields will be marked for flattening when the GFB schema is created. In addition, the DDM will expand with additional occurrences of the flattened fields as specified. You can use this updated DDM then when creating and maintaining the GFB schema.

Removing the Field Flattening Trigger

If, after you have specified that flattening should occur for a field, you decide not to flatten it, you need to remove the flattening trigger defined for the field in the DDM. This section describes this process.

▶ **To remove the field flattening trigger for a field:**

- 1 Expand the DDM in the **SYSTRANS DDMs** column of the Data Mapping Tool main window.
- 2 Scroll through the fields in the DDM and locate the MU field, PE field, subfield, or superfield for which you want to trigger flattening. Flattened MU fields are identified with the  icon, flattened PE fields are identified with the  icon, and flattened subfields and superfields are identified with the  icon.
- 3 Right-click on the field and select **Unflatten (Replicate to Sub-tables)** from the drop-down menu.

The DDM will remove the additional fields created by the flattening trigger. You can use this updated DDM then when creating and maintaining the GFB schema.

9 Maintaining the Target Relational Database List

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- Showing and Refreshing Columns 32
- Maintaining RDBMS Connection Properties 33

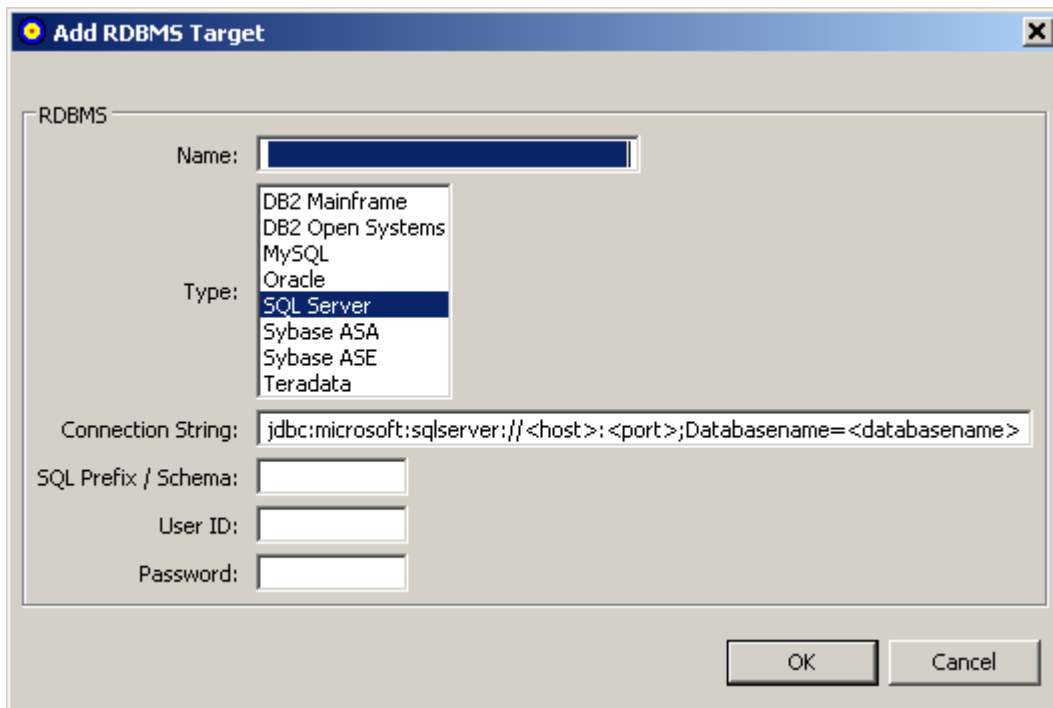
This chapter describes how to manage the list of target RDBMS databases in the Data Mapping Tool.

Adding a Target Database

► **To add a target relational database (RDBMS):**

- 1 Select the **Add RDBMS Target..** menu option from the **Targets** menu .

The **Add RDBMS Target** window appears.



- 2 Fill in the fields on the **Add RDBMS Target** window as described in the following table:

Field Name	Description	Required?
Name	Specify the name of the target database. This name must match the name of the RDBMS catalog.	Yes
Type	Scroll through the list of RDBMS types and select any of the listed database types.	Yes
Connection String	Edit the connection string that appears, based on the type of database you have selected. .	Yes

Field Name	Description	Required?
SQL Prefix / Schema	Specify the SQL prefix or schema for the target database, if necessary. This specification is case-sensitive and is required for Oracle and DB2 databases.	No
User ID	Specify a user ID authorized to access and update the RDBMS.	Yes
Password	Specify the password of the user ID with authorization for the RDBMS.	Yes

- When all fields have been supplied as required, click the **OK** button to save the connection to the RDBMS.

The Data Mapping Tool main window reappears and the RDBMS is listed in the **Target RDBMS** column.

Removing a Target Database

▶ To remove a target database from the list in the **Target RDBMS** column of the Data Mapping Tool main window:

- Right-click on the RDBMS in the **Target RDBMS** list that you want to remove.
- Select the **Delete** menu option from drop-down menu.

The target database is removed from the list. The RDBMS itself is not removed; it is removed only from the list in the **Target RDBMS** column. To remove the tables from the RDBMS, you must do so using the management tools provided with the RDBMS.

Showing and Refreshing RDBMS Tables

You can optionally show the RDBMS tables and refresh the list of tables, as needed.

▶ To show the tables in an RDBMS listed in the **Target RDBMS** column of the Data Mapping Tool main window:

- Right-click on the RDBMS in the **Target RDBMS** list whose tables you want to show.
- Select the **Show Tables** menu option from drop-down menu.

The list of tables in the RDBMS appears.

▶ **To refresh the table list for an RDBMS listed in the Target RDBMS column of the Data Mapping Tool main window:**

- 1 Right-click on the RDBMS in the **Target RDBMS** list whose tables you want to refresh.
- 2 Select the **Refresh Tables** menu option from drop-down menu.

The list of tables for the RDBMS is refreshed.

Showing and Refreshing Columns

You can optionally show the columns in an RDBMS table and refresh the list of columns in a table, as needed.

▶ **To show the columns in an RDBMS table listed in the Target RDBMS column of the Data Mapping Tool main window:**

- 1 Expand the RDBMS in the **Target RDBMS** column to see the tables included in it. If you cannot expand the RDBMS, verify that you have requested that the tables be shown for that RDBMS. Read [Showing and Refreshing RDBMS Tables](#) for more information.
- 2 Right-click on the RDBMS table in the **Target RDBMS** list whose columns you want to show.
- 3 Select the **Show Columns** menu option from drop-down menu.

The list of columns in the RDBMS table appears.

▶ **To refresh the column list for an RDBMS table listed in the Target RDBMS column of the Data Mapping Tool main window:**

- 1 Right-click on the RDBMS table in the **Target RDBMS** list whose columns you want to refresh.
- 2 Select the **Refresh Columns** menu option from drop-down menu.

The list of columns for the RDBMS table is refreshed.

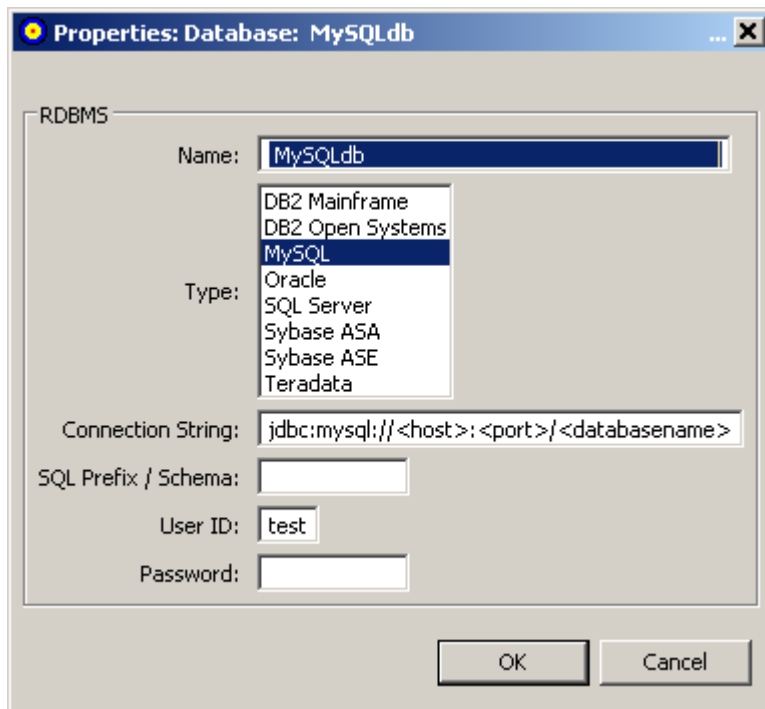
Maintaining RDBMS Connection Properties

You can maintain the connection properties for any RDBMS listed in the **Target RDBMS** column of the Data Mapping Tool main window.

▶ **To review connection properties for an RDBMS:**

- 1 Right-click on the RDBMS in the **Target RDBMS** list whose properties you want to review and maintain.
- 2 Select the **Properties** menu option from drop-down menu.

The properties are displayed in a **Properties** dialog.



- 3 Alter the fields on the **Properties**, if necessary, as described in [Adding a Target Database](#), earlier in this section.

10

Creating and Maintaining the GFB Schema

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This chapter describes the creation and maintenance of GFB schema using the Data Mapping Tool.



Note: If you want to use UTF-8 character encoding, you must verify that your GFB field lengths are increased as required to accommodate the character set referenced by the code page you select and the data requested in the GFB. You can increase these field lengths manually by editing the Predict file or data definition module (DDM) used when the GFB is generated.

Creating the Schema from an Entire DDM

You can create a GFB schema that maps all the fields in the DDM to tables in your RDBMS. One table is created with the same name as the DDM and additional tables are created for each MU or PE field within the DDM.

Once a GFB schema is created, you can use it to generate a global format buffer (GFB) and associated field table (GFFT) for use by the Event Replicator for Adabas and the Event Replicator Target Adapter. For more information, read [Generating a GFB and Field Table](#), elsewhere in this guide.

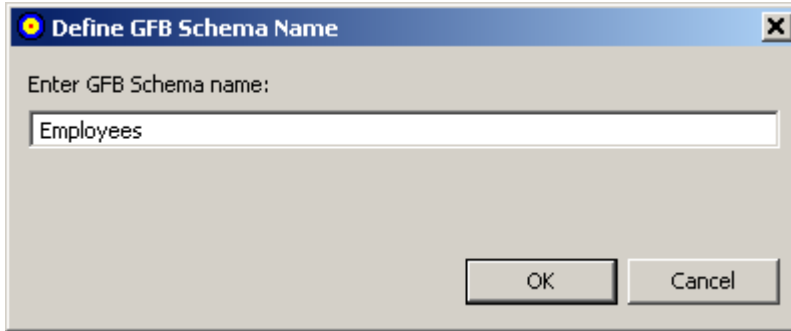
► **To create the GFB schema from an entire DDM, complete the following steps:**

- 1 Drag and drop a DDM from the **SYSTRANS DDMs** (leftmost) pane onto a target RDBMS in the **Target RDBMS** (middle) pane. For complete information on listing DDMs in the **SYSTRANS DDMs** column and target relational databases in the **Target RDBMS** pane, read [Locating and Selecting a Source DDM](#) and [Maintaining the Target Relational Database List](#), elsewhere in this guide.




Note: If you want to use UTF-8 character encoding, you must verify that your GFB field lengths are increased as required to accommodate the character set referenced by the code page you select and the data requested in the GFB. You can increase these field lengths manually by editing the Predict file or data definition module (DDM) used when the GFB is generated.

A **Define GFB Schema Name** dialog appears.



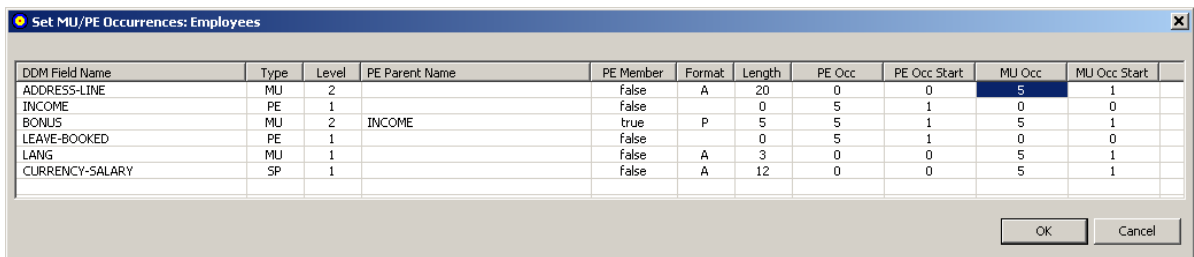
- Specify the name you want to use for the RDMS table on the **Define GFB Schema Name** dialog. The name can be up to 32 characters long. The name you specify is used for the RDBMS table and its subtables.

 **Note:** This is not the same as the name of the global format buffer (GFB) definition used by the Event Replicator for Adabas.

In addition, once you have selected a name here, you can always rename it in the **GFB Schema** area of the Data Mapping Tool. For more information on renaming tables, the GFB Schema, read [Renaming Schema Tables](#), elsewhere in this guide.

- Click **OK**.

The **Set MU/PE Occurrences** dialog appears, allowing you to specify the number of occurrences for MU and PE fields for which no flattening has been triggered. The following is an example of this dialog:



- Optionally, adjust the MU or PE occurrence counts (**MU Occ** and **PE Occ** fields) and the MU or PE starting occurrence number (**MU Occ Start** and **PE Occ Start** fields) for the unflattened MU and PE fields listed in this dialog. Valid values must be positive integers.
- Click **OK** when finished.

When all MU and PE fields have been accounted for, the GFB schema is created in the **GFB Schema** (rightmost) pane of the Data Mapping Tool main window.

The GFB schema consists of one or more tables. One table is created for the DDM; an additional table is created for each unflattened MU field, PE field, subfield, or superfield in the DDM.

Creating the Schema from Individual Fields in the DDM

You can create a GFB schema that maps individual fields in a DDM to existing tables in your RDBMS. You can also create a GFB schema that maps all the fields in a DDM to previously undefined tables in your RDBMS. For more information, read [Creating the Schema from an Entire DDM](#), elsewhere in this guide. Once a GFB schema is created, you can use it to generate a global format buffer (GFB) and associated field table for use by the Event Replicator for Adabas and the Event Replicator Target Adapter. For more information, read [Generating a GFB and Field Table](#), elsewhere in this guide.



Note: By default, if the table you are mapping to was not originally created by the Event Replicator Target Adapter, it may not contain the field ISN. If this is the case, replication to this target will likely fail with an error indicating that the RDBMS does not contain an ISN column. Even if the ISN field is not defined as a primary key, its value in each Adabas record is always replicated to the target base (parent) table. To resolve this problem, we recommend that you alter the table in your target RDBMS, adding a column named "ISN" and defined as type integer. Alternatively, you could set the Event Replicator Target Adapter **Adabas-RDBMS Synchronization Level** field to "apply" in the target database option definition for replication to your RDBMS. For more information about target database option definitions in Event Replicator Target Adapter, read *Specifying Target Database Processing Option Definitions*, in the *Event Replicator Target Adapter Administrator's Guide*.

▶ To create the GFB schema from individual fields in the DDM, complete the following steps:

- 1 Be sure that you have expanded the tables and table columns in the **Target RDBMS** pane of the Data Mapping Tool main window.
- 2 Drag and drop a single field from the DDM in the **SYSTRANS DDMs** (leftmost) pane onto an existing field (table column) name in a table in the target RDBMS listed in the **Target RDBMS** (middle) pane.

The following general rules must be followed:

- For MU (multiple occurrence), PE (periodic group), SB (subfield), or SP (superfield) fields, the target table name must conform to the primary/foreign key naming relationships used by the Event Replicator Target Adapter.
- The length of the field being mapped must not exceed the length of the field (column) in the RDBMS table.
- Consideration should be given to matching data types of the fields in the DDM and the fields in the target table. Do not attempt to map fields of different data types.
- If you want to use UTF-8 character encoding, you must verify that your GFB field lengths are increased as required to accommodate the character set referenced by the code page you select and the data requested in the GFB. You can increase these field lengths manually

by editing the GFB itself or by editing the Predict file or data definition module (DDM) used when the GFB is generated.

- Duplicate mappings in the same target table are not allowed. You cannot map the same field to the same target RDBMS table and column combination.
- If the ISN is not the primary key of your existing RDBMS table, you must change the primary key assignment. Likewise, if your RDBMS table uses multiple primary keys, you must set each composite key field and then specify the composite key order. For more information on maintaining primary and composite keys in your GFB schema, read [Specifying Keys](#), elsewhere in this guide.



Note: In addition, if ISN is not the primary key, you must also manually add a dummy ISN column into the target table with integer as its data type. This will ensure that replication occurs successfully.

For complete information on listing DDMs in the **SYSTRANS DDMs** pane and target relational databases in the **Target Table** pane, read [Locating and Selecting a Source DDM](#) and [Linking to a Target Database](#), elsewhere in this guide.

The GFB schema is partially created in the rightmost (**GFB Schema**) pane of the Data Mapping Tool main window.

- 3 Repeat step 1 until all fields are mapped.

The GFB schema is updated in the **GFB Schema** (rightmost) pane of the Data Mapping Tool main window.

- 4 Optionally, rename the GFB schema in the **GFB Schema** pane. By default, schemas created from individual fields in the DDM have the same name as the name of the RDBMS table to which they are mapped. For complete information on renaming a GFB schema, read [Renaming Schemas](#), elsewhere in this guide.
- 5 Click **Save** when finished.


The GFB schema has been created in the **GFB Schema** (rightmost) pane of the Data Mapping Tool main window. You can now use the Data Mapping Tool to generate a GFB and field table from the GFB schema.

Renaming Schemas

Once a GFB schema is created, you can rename it if necessary.

▶ **To rename a GFB schema once it is created:**

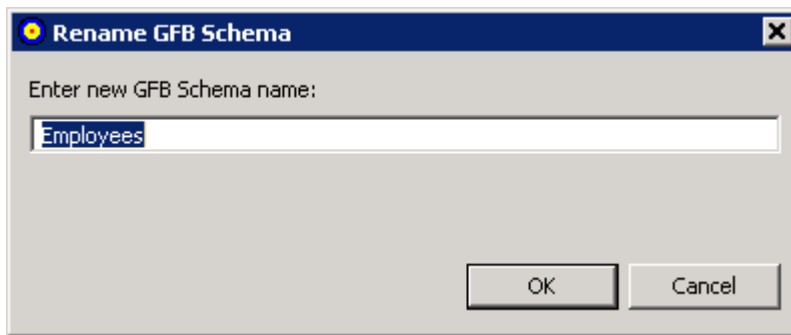
- 1 Right-click on the name of the schema you want to rename in the **GFB Schema** column of the main Data Mapping Tool window.

GFB schema names (which will result in the main table name of your RDBMS table) are shown in the list prefixed by the icon .

A drop-down menu appears.

- 2 Select **Rename** from the drop-down menu.

A **Rename GFB Schema** dialog appears.



- 3 Specify a new name for the GFB schema in the dialog box and click **OK**.


The GFB schema is renamed.

Renaming Schema Fields

Once a GFB schema is created, you can rename any of the schema fields in the table if necessary.

▶ **To rename a GFB schema field in an GFB schema:**

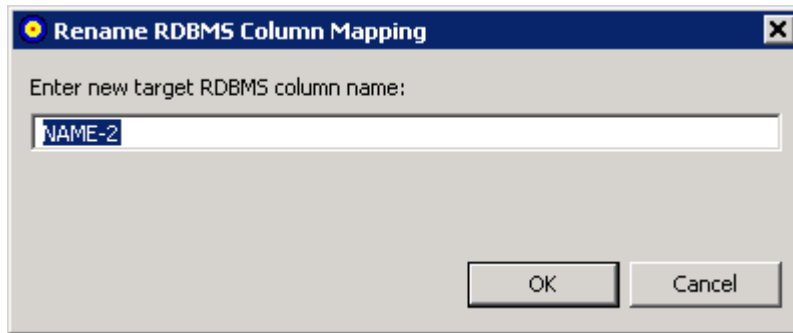
- 1 Right-click on the name of the schema field you want to rename in the **GFB Schema** column of the main Data Mapping Tool window.

GFB schema field names (which will result in the name of a column in your RDBMS table) are shown in the list prefixed by the icon .

A drop-down menu appears.

- 2 Select **Rename** from the drop-down menu.

A **Rename RDBMS Column Mapping** dialog appears.



- 3 Specify a new name for the GFB schema field (RDBMS table column) in the dialog box and click **OK**.


The field is renamed.

Reviewing GFB Schema Field Properties

You can review the properties of a GFB schema field.

▶ To review a GFB schema field's properties:

- 1 Right-click on the name of the schema field whose properties you want to review in the **GFB Schema** column of the main Data Mapping Tool window.

GFB schema field names are shown in the list prefixed by the icon .

A drop-down menu appears.

- 2 Select **Properties** from the drop-down menu.

The **Properties: GFB Schema Field: *fieldname*** dialog appears, listing the GFB schema field properties.

Properties: GFB Schema Field: NAME => NAME

General

Name:

Type:

Parent Node:

Number of Children:

ADABAS Basic

ADABAS Short Name:

ADABAS Format:

ADABAS Length:

Precision (digits after decimal):

ADABAS Extended

DDM Field Name:

ADABAS Type:

ADABAS Nesting Level:

Simple Group Member:

Periodic Group Member:

Sub/Super-Field with Occurrences:

Sub/Super-Field with MU in PE Occurrences:

DDM Parent

GR Parent ADABAS Short Name:

GR Parent Long Name:

PE Parent ADABAS Short Name:

PE Parent Long Name:

Replication

RDBMS Column Name:

RDBMS Column Name Length:

RDBMS Format:

Key Type:

Composite Key Sequence:

Character Set:

Read Only:

Flattened:

Occurrences

Periodic Group (PE) Occurrences:

Periodic Group (PE) Occurrences Start:

Multiple Value (MU) Occurrences:

Multiple Value (MU) Occurrences Start:

Most of the fields in this dialog are read-only. If the field is an MU field, a PE field, a subfield, or a superfield you can modify the settings in the **Occurrences** section of this dialog. The following example shows the **Occurrences** section of a field properties dialog for an MU field:

The image shows a dialog box titled "Occurrences" with four input fields:

- Periodic Group (PE) Occurrences: 0
- Periodic Group (PE) Occurrences Start: 0
- Multiple Value (MU) Occurrences: 15
- Multiple Value (MU) Occurrences Start: 1

- 3 If the field is an MU field, a PE field, a subfield, or a superfield, optionally modify the occurrence count or starting occurrence number in the **Occurrences** section of the dialog.
- 4 Click **OK** when you are done reviewing the properties.

Redefining Schema Fields

Once you have created a GFB schema, you can redefine a schema field. This is especially useful if you want to split a field into multiple smaller fields (column) in the resulting RDBMS table. In a Data Mapping Tool schema, you can redefine a field into multiple fields unless it is:

- a key field (primary or composite key field)
- a descriptor field (superdescriptor, subdescriptor, hyperdescriptor, phonetic, or collation descriptor)



Note: Installations wishing to redefine schema fields must have Event Replicator for Adabas 3.2.1 or later installed.

Multiple value fields (MU fields) and periodic groups (PE fields) are supported.

In addition, you can redefine fields into combinations of the following data types: alphanumeric, binary, date, floating point, integer, logical, numeric, packed decimal, and time.

Finally, a field that is redefined cannot be expanded beyond its original field length unless it is first expanded in the original record and associated DDM. Once a GFB schema is created, you cannot increase the overall size of a field; so the sum of the sizes of the child fields that comprise a redefined field (the parent) must be less than or equal to the size of the original parent field. Note that you can also leave spaces between child fields of a redefined field; the Data Mapping Tool detects these spaces and fills them with read-only filler fields when you generate the GFB and associated field table (GFFT) entries. Filler fields appear in the GFFT with column names of **FILLER**.



Note: Fields that have been redefined cannot become primary keys and cannot be included in composite keys for the table.


For every child field you define, you must specify a length and an RDBMS column name. If you do not specify an offset for a child field, the Data Mapping Tool automatically calculates it based on the lengths of the other child fields. If you do not specify a field format for a child field, the format of the parent field is assumed.

- To add a child field, click the **Add** button. A new blank child line becomes editable in the table.
 - To insert a new child field between two fields already in the table, select the **Action** box (check it) of the lower child field and then click the **Insert** button. A new blank child line is inserted between the two existing child fields and becomes editable in the table.
 - To delete a child field from the table, select the **Action** box (check it) of the child field and then click the **Delete** button. The child field is removed from the table.
- 5 When all child fields have been specified in the table, click **Done**.

The field appears as redefined (split) in the GFB schema. When the GFB and associated field table are generated, the redefined field will appear as multiple columns in the resulting RDBMS table.

▶ **To undo a schema field redefinition:**

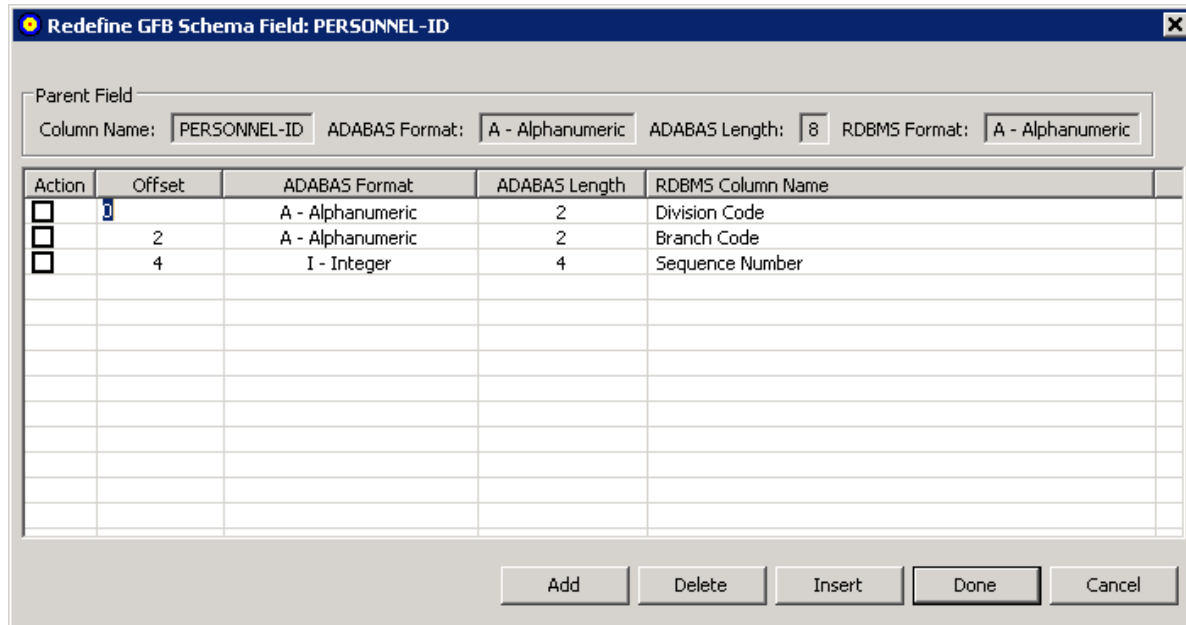
- 1 Right-click on the name of the schema field whose redefined properties you want to undo in the **GFB Schema** column of the main Data Mapping Tool window.

GFB schema field names are shown in the list prefixed by the icon .

A drop-down menu appears.

- 2 Select **Redefine** from the drop-down menu.

The **Redefine GFB Schema Field: *fieldname*** dialog appears, listing the GFB schema field you can redefine and its child entries. In the following sample, the parent field, PERSONNEL-ID, has been split into three child fields: Division Code, Branch Code, and Sequence Number.




- 3 For each child field, select the **Action** box (check it) and then click the **Delete** button. The child field is removed from the table.
- 4 Click **Done**.

The child fields are removed from the GFB schema and the parent field is no longer redefined (split). When the GFB and associated field table are generated, the parent field will appear as a single column in the resulting RDBMS table.

Specifying Keys

By default, the ISN (internal sequence number) is the primary key of every record in the GFB schema. However, the Data Mapping Tool allows you to change the primary key of the table in the schema and it allows you to select multiple keys to be used as a composite key for the table.

Key fields in the schema are prefixed by the icon .



Notes:

1. Split (redefined) columns cannot become primary keys and cannot be included in composite keys.
2. The Event Replicator Target Adapter will not process updates for a field that is the primary key for an RDBMS table or for any fields that comprise a composite key for the table.
3. At this time, the Event Replicator Target Adapter does not support the use of MU or PE fields as primary keys or in composite keys.


This section covers the following topics:

- [Changing the Primary Key](#)
- [Creating a Composite Key](#)
- [Changing the Composite Key Order](#)
- [Removing Primary Key Specification](#)

Changing the Primary Key

▶ To change the primary key:

- 1 Right-click on the name of the schema field that you want to make a primary key in the **GFB Schema** column of the main Data Mapping Tool window.

GFB schema field names are shown in the list prefixed by the icon .

A drop-down menu appears.

- 2 Select **Set Primary Key** from the drop-down menu.

The schema field you selected becomes the primary key for the table. If the ISN field was the primary key prior to this change, it is no longer listed in the schema.

Creating a Composite Key

A composite key is key that is comprised of multiple fields in the schema. Any field except the ISN field and redefined (split) fields can be used in a composite key.




Note: Installations wishing to create composite keys must have Event Replicator for Adabas 3.2.1 or later installed.

▶ To create a composite key:

- 1 Right-click on the name of a schema field that you want to make part of a composite key in the **GFB Schema** column of the main Data Mapping Tool window.



Note: At this time, the Event Replicator Target Adapter does not support the use of MU or PE fields as primary keys or in composite keys.


GFB schema field names are shown in the list prefixed by the icon .

A drop-down menu appears.

- 2 Select **Set Primary Key** from the drop-down menu.

The schema field you selected becomes a key for the table. If the ISN field was the primary key prior to this change, it is no longer listed in the schema. The ISN field cannot be used in a composite key.

- Repeat steps 1 and 2 for any additional fields you want included in the composite key.

All fields you have identified as key fields are combined to create a composite key and are prefixed by the icon P in the schema.


Read *Changing the Composite Key Order*, next in this section, for information on how to specify the order of the fields in the composite key.

Changing the Composite Key Order

By default, the order of the fields in a composite key is the same as the order of the original primary key selection.

► **To change the order of the fields in a composite key:**

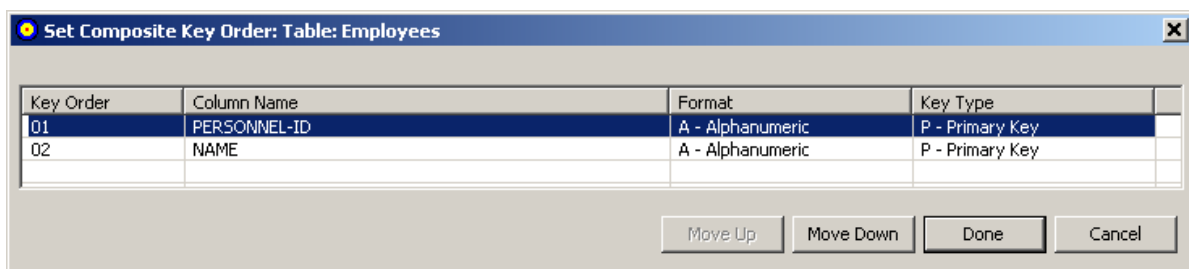
- Right-click on the name of any of the schema fields that comprise the composite key in the **GFB Schema** column of the main Data Mapping Tool window.

Key field names are shown in the list prefixed by the icon P.

A drop-down menu appears.

- Select **Set Composite Key Order** from the drop-down menu.

The **Set Composite Key Order** dialog appears.



- You can reorder the fields in the composite key using the **Set Composite Key Order** dialog. Simply select the field you want to move (click on it) and click the **Move Up** or **Move Down** buttons until it is placed where you want it.


- When all composite key fields are in the order you want, click **Done**.

The dialog closes and the composite key order is logically updated. Any subtables containing foreign and primary key references are updated to show the new composite key order.

Removing Primary Key Specification

▶ **To remove the primary key specification for a field in the table:**

- 1 Right-click on the name of the schema field that you want to remove as the primary key or remove from a composite key in the **GFB Schema** column of the main Data Mapping Tool window.

Key field names are shown in the list prefixed by the icon .

A drop-down menu appears.

- 2 Select **Remove Primary Key** from the drop-down menu.


The schema field you selected is no longer a primary key for the table. If no other primary key is defined for a table, the ISN field appears as the primary key.

Reviewing GFB Schema Properties

You can review the proprieties of a GFB schema.

▶ **To review a GFB schema's properties:**

- 1 Right-click on the name of the schema whose properties you want to review in the **GFB Schema** column of the main Data Mapping Tool window.

GFB schema names are shown in the list prefixed by the icon .

A drop-down menu appears.

- 2 Select **Properties** from the drop-down menu.

The **Properties: GFB Schema: *schemaname*** dialog appears, listing the GFB schema properties.

You cannot edit any properties on this dialog.


- 3 Click **OK** when you are done reviewing the properties.

Removing a GFB Schema

You can remove a GFB schema from the Data Mapping Tool (for example, if you want to start over).

▶ **To rename a GFB schema once it is generated:**

- 1 Right-click on the name of the schema you want to remove from the **GFB Schema** column of the main Data Mapping Tool window.

GFB schema names are shown in the list prefixed by the icon  .

A drop-down menu appears.

- 2 Select **Delete** from the drop-down menu.

The GFB schema is removed.



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Generating a GFB and Field Table

Once you have created a GFB schema, you can generate a GFB and field table (GFFT). The generated GFB and field table file can be imported into Event Replicator Administration for use with the Event Replicator Target Adapter. For information on importing the file, read *Importing a Data Mapping Tool GFB and Field Table* in *Event Replicator Administration User's Guide*.

For information on using the Event Replicator Target Adapter, read *Submitting Event Replicator Target Adapter Requests* (in the *Event Replicator Administration User's Guide*) and the Overview in *Event Replicator Target Adapter User Guide*.

▶ **To generate a GFB and field table, complete the following steps:**

- 1 Create a GFB schema as described in [Creating and Maintaining the GFB Schema](#), elsewhere in this guide.
- 2 If desired, save the GFB schema by clicking on the  button or the  button on the Data Mapping Tool main window or by clicking on the **Save Mapping** option on the **File** menu.
- 3 Right-click on the name of the GFB schema in the **GFB Schema** column of the Data Mapping Tool main window.

The GFB schema name is prefixed by the icon .

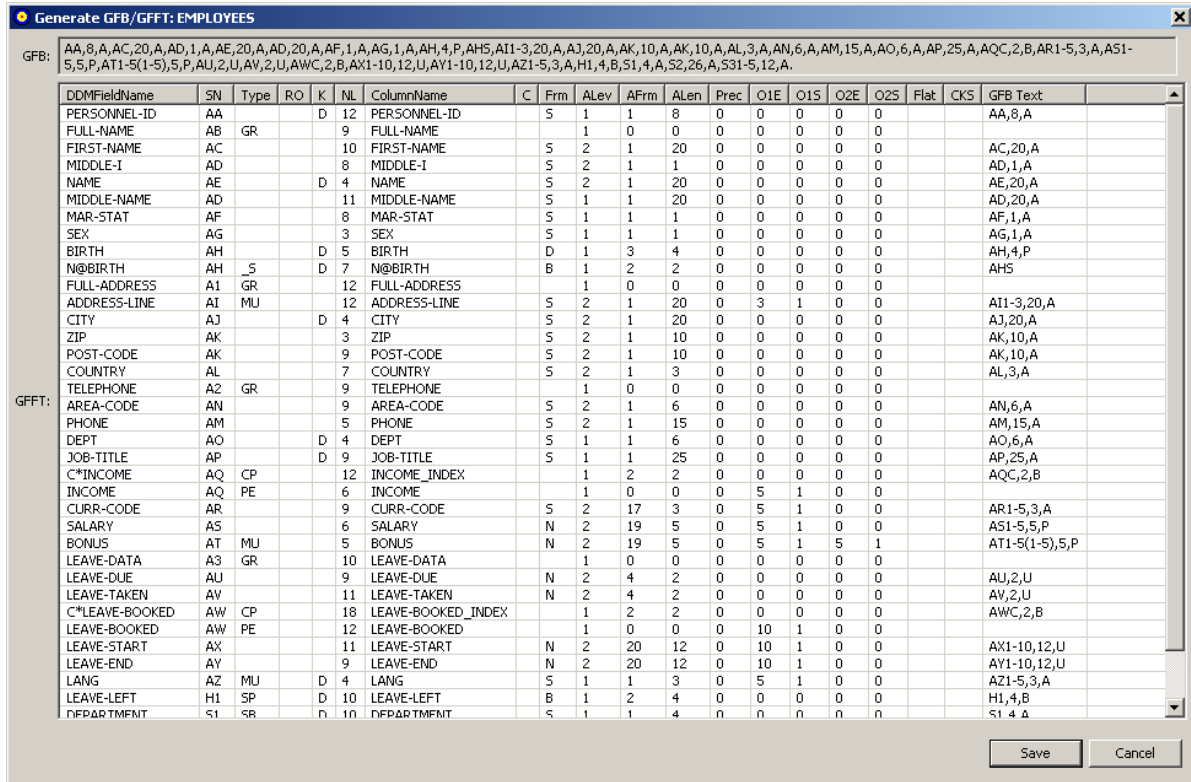
A drop-down menu appears.

- 4 Click on the **Generate GFB/GFFT** option on the drop-down menu.

Or:

You can also select the **Generate GFB/GFFT** option on the **GFB** menu.

The GFB and field table are generated and the **Generate GFB/GFFT** dialog appears.



You can use this dialog to review the generated GFB and GFFT.

- 5 Click the **Save** button to save the generated GFB and its associated field table (GFFT).

A save dialog appears allowing you to specify a directory and file name for the generated file.

- 6 Use the save dialog to save the GFB/GFFT file.

Once you have saved the generated GFB and field table file, you can import it into Event Replicator Administration for use with the Event Replicator Target Adapter. For information on importing the file, read *Importing a Data Mapping Tool GFB and Field Table in Event Replicator Administration User's Guide*.

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Managing Logging and Log Files

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When the Data Mapping Tool is installed, all Data Mapping Tool messages are automatically written to the Data Mapping Tool log file. You can control the level of log messages written to the Windows and UNIX event logs; read [Setting Log Levels](#), elsewhere in this chapter, for more information.

Log File Location

All Data Mapping Tool log files are stored in the *MappingTool\logs* subdirectory of your Data Mapping Tool installation. The Data Mapping Tool log file name is *MT-log.txt.nn*, where *nn* is a sequential number of the log file (newest log files have the lowest or no number). The log files contain all current log messages, including statistics about the Data Mapping Tool session processing. If you have a problem, please keep this log file.

Reviewing the Log Files

The log files can be reviewed using a text editor.

Setting Log Levels

You can set the log level of messages written to the log files. Seven log levels are available (listed in order of settings that result in the most logging to those resulting in the least logging):

Log Level	Description
TRACE	All messages are logged or displayed. Note: Setting this log level can impact performance.
DEBUG	Only debugging, informational, warning, error, and fatal messages are logged or displayed. Note: Setting this log level can impact performance.
INFO	Only informational, warning, error, and fatal messages are logged or displayed.
WARN	Only warning, error, and fatal messages are logged or displayed.
ERROR	Only error and fatal messages are logged or displayed.
FATAL	Only fatal messages are logged or displayed.
OFF	No logging occurs or displayed.

▶ To change the log level of messages written to the log files:

- 1 Once the Data Mapping Tool is **started**, select the **Logging Level...** option on the **Options** menu.

Or:

Click on the  button.

The **Set Logging Level** dialog appears.



- 2 Select the log level as needed. Valid log level values are TRACE, DEBUG, INFO, WARN, ERROR, FATAL, and OFF, as described earlier in this section.



Note: Setting the log level to TRACE or DEBUG can impact performance.

- 3 When the trace level has been selected, click **OK**.

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