

Masking data

Data masking is a way of securing sensitive data during the development or testing phases of a database development project. It is often performed as a security or compliance measure that protects important information. By masking valid production data, you can provide a copy of the data that is “scrambled” but still represents your production environment.

DB Change Manager lets you specify masking rules for moving data between a source and a target in a data comparison job. You can set rules for individual columns, tables, and entire databases. When you run a data comparison with the Automatically Synchronize option on, the data on the target is replaced with data from the source and any items configured with a masking rule will be masked. You can then use the masked data in your development and testing environments.

The following tasks describe how to create masked data:

- [Create a New Masking Job](#)
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Create a New Masking Job

Use the [Data Comparison Job Editor](#) to define a masking job.

To start creating a new Data Masking Job:

- Select **File > New > Data Comparison Job**.

Specify a Masking Job Name

The name of the job distinguishes it between other jobs in the application environment.

To name a masked data job

- Type the name of the job in the **Name** field of the Data Masking Job Editor.

The screenshot shows the 'Job Name and Description' section of the Data Masking Job Editor. It features a 'Name' field containing 'Untitled-Data-Comparison-Job-1' and a 'Notes' text area. Below the name field, there is a 'Project' dropdown set to 'Change Management' with a 'Details...' button, and a checkbox for 'Track results in Compliance Explorer' which is currently unchecked.

Specify Source and Target Data Sources

The **Job Sources** section of the Data Comparison Job Editor contains the **Data Comparison Source** box, which identifies the original data source, and **Target Data Source** box, which identifies the data source where the data is altered.

To specify source and target data sources

1. Click and drag a data source to be masked from the **Data Source Explorer** to the **Data Comparison Source** box. Drag and drop a target data source, where the mask is applied, from the **Data Source Explorer** to the **Data Comparison Target** box.
2. Use the drop-down **Database** menu to specify the database to be masked for the **Data Comparison Source**, and the database to which you want to apply masking definitions on the **Data Comparison Target**.

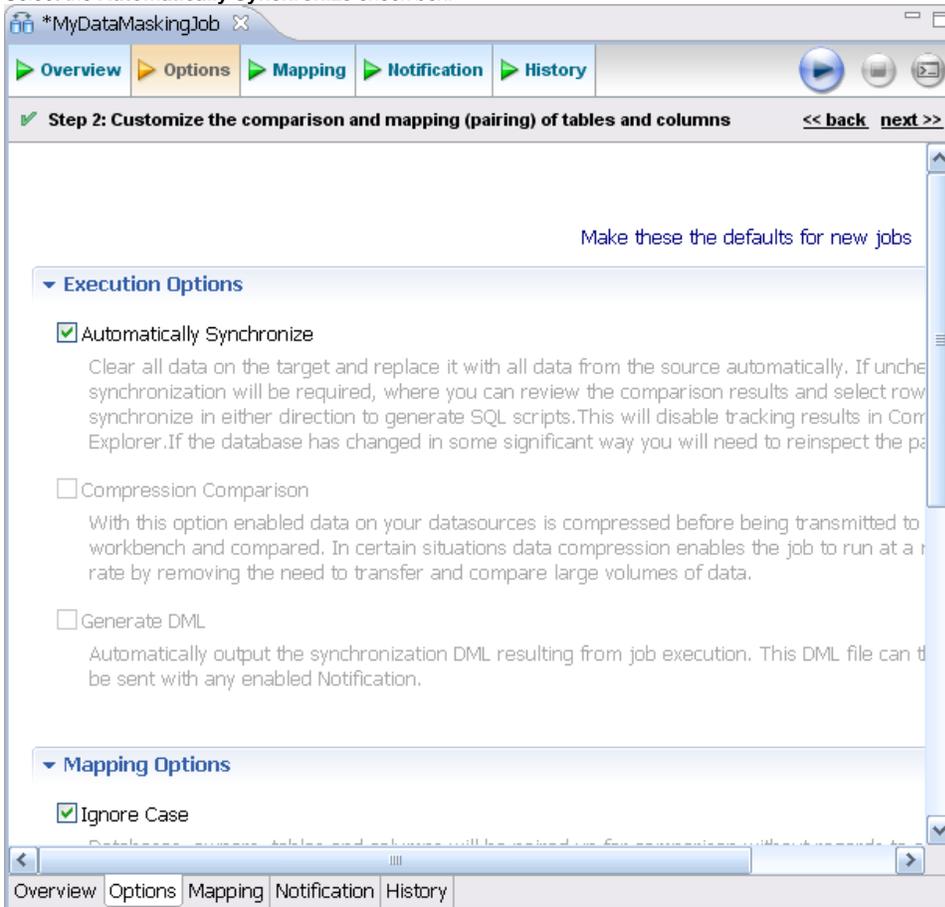
The screenshot shows the 'Job Sources' section of the Data Comparison Job Editor. It contains two panels: 'Data Comparison Source' and 'Data Comparison Target'. Each panel has fields for 'Name', 'Type', and 'Host', and a 'Select Datasource' button. Below these fields are dropdown menus for selecting a database.

Set to Automatically Synchronize

Prior to running a masking job, set it to automatically clear all the data on the target and replace it with new, masked data.

To set synchronization

1. Click on the Options tab.
2. Select the **Automatically Synchronize** check box.



Specify Mapping Options

Use the Mappings tab to specify the tables to mask. You can apply a Default Masking Rule to selected columns using the pulldown menus.

The options are:

- **Use Default.** The default masking rule as set in the **Database Mapping** box.
- **None.** No masking is applied.
- **Randomize.** Replaces characters with random other characters.
- **Shuffle.** Reorders the values in different rows. For example, in a **First Name** column Bob, Ted, and Alice can change to Alice, Bob, and Ted.

Use the check boxes in the left-hand column to de-select any columns that you do not want to include in the data masking job process.

To specify mapping options

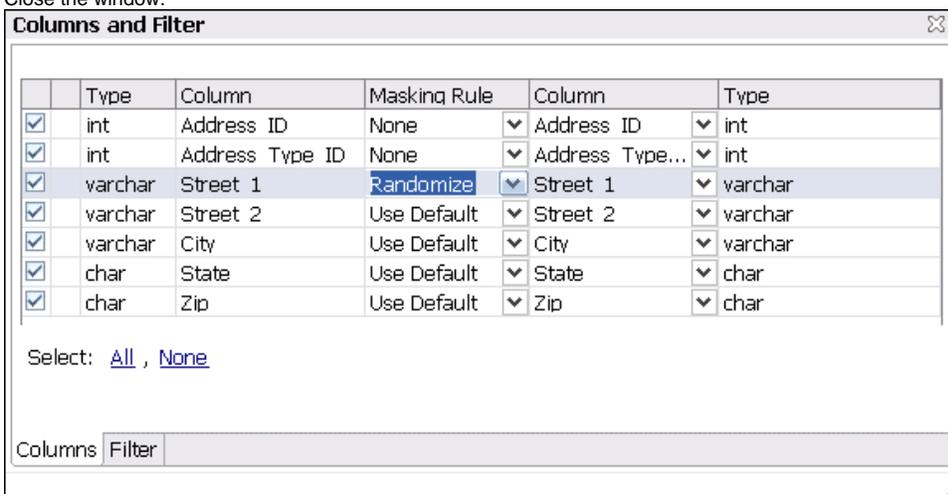
1. Click on the Mappings tab.
2. Select check box of the database you want to mask.
3. Click on the **Yes, retrieve the objects in the pair** button to inspect the tables and columns. The Table Mapping section opens.
4. Select a **Default Masking Rule** for the in the **Database Mapping** box.
5. Select a **Default Masking Rule** in the **Table Mapping** box.

Specify Masking Rules for Individual Columns

You can specify different masking rules for different columns.

To specify a masking rule for a column

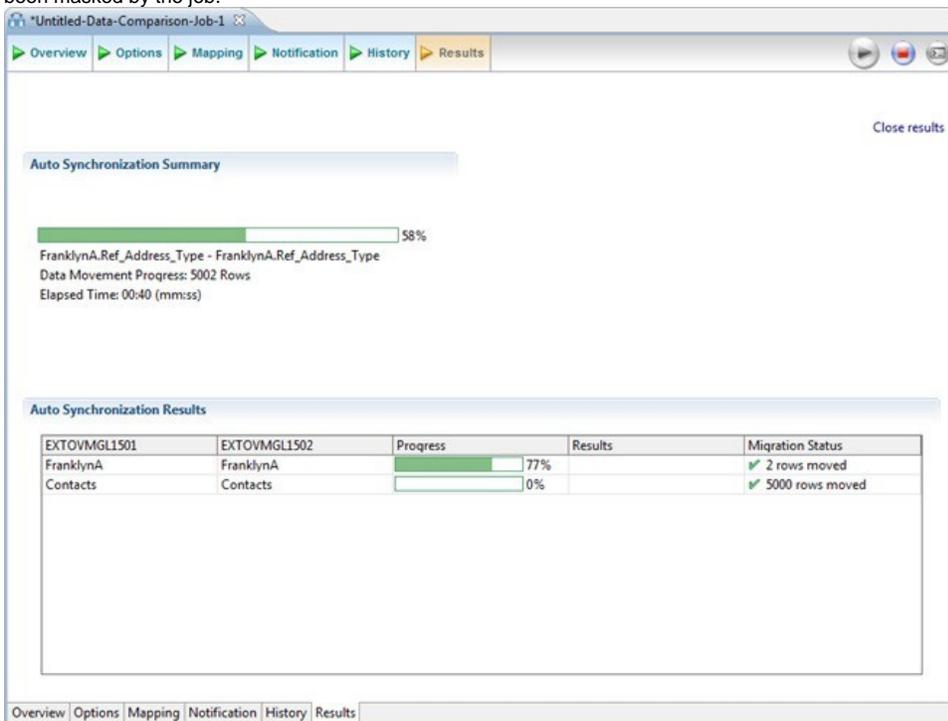
1. In the **Table Mapping** box, click **View Column Mapping**.
2. Click on the **Data Masking Rule** option for the column and select from the pulldown menu one of the following:
 - **Use Default.** The default masking rule as set in the **Database Mapping** box.
 - **None.** No masking is applied.
 - **Randomize.** Replaces characters with random other characters.
 - **Shuffle.** Reorders the values in different rows. For example, in a **First Name** column Bob, Ted, and Alice can change to Alice, Bob, and Ted.
3. Close the window.



Run the Database Masking Job

To execute the data masking job

1. Click **File > Save** to save the job.
2. Click the **Run Job** icon in the upper right-hand corner of the screen.
3. Click **OK** in the Confirmation dialog box to agree that you want to overwrite the target data.
The Results tab displays the progression of the masking job as it executes, and the **Rows Written** column indicates how many rows of data have been masked by the job.



See the Masked Data

You can see the masked data by running a new Data Comparison job and looking at the changes. For more information, see [Comparing data](#).

For rows that do not have masking applied, you should see "0" in the **Different** column of the **Results Overview** box. For rows that are masked, you should see the number of rows that changed.

In the **Selected Table** box, you can see the masked data in the target table. For example, the **First** and **Last Name** data shown below was masked using the **Randomize** setting.

The screenshot shows a software interface for data comparison. At the top, there are tabs for Overview, Options, Mapping, Notification, History, Results, and Database Results. The 'Results' tab is active. Below the tabs, there is a 'Results Overview - FranklynA' section containing a table with the following data:

Source: Fran...	Target: Fra...	Matched	Only in TORL...	Only in TORL...	Different	
dbo.Category	dbo.Category	16	0	0	0	
dbo.Customer	dbo.Customer	0	0	0	348	

Below the table are buttons for 'View Diff Report' and 'Export Diff Results...'. The 'Selected Table' section shows two side-by-side grids for 'TORLABSQL05_1.FranklynA.dbo.Customer' and 'TORLABSQL05_2.FranklynA.dbo.Customer'. The first grid shows unmasked data, and the second grid shows the same data with names randomized.

Customer ID	First Name	Last Name
734	James	Battiste
735	Samual	Philpott
736	Noel	Arra
737	Gaston	Amesqui

Customer ID	First Name	Last Name
734	Gxibk	Yxssfimst
735	Jaciab	Fwzfiac
736	Nael	Eaee
737	Okeybx	Oaseqfw

At the bottom of the interface, there are more tabs: Overview, Options, Mapping, Notification, History, Results, Database Results.