Database Linker Tutorial

1 Overview

1.1 Utility to Connect MindManager 8 to Data Sources

MindManager 8 introduces the built-in ability to automatically map data contained in a database, allowing you to import structured data into your MindManager map.

There are an infinite number of reasons why a user might want to import structured data into a map, but here's a list of some potential uses:

- Sales: Lookup customer information from a customer database while building an Account Plan map.
- Human Resources: Construct an organization chart from personnel data stored in an HR database.
- Sales: Add order history to an Account Opportunity map.
- Marketing: Add previous campaign performance metrics stored in an Excel file to your next marketing campaign planning map.

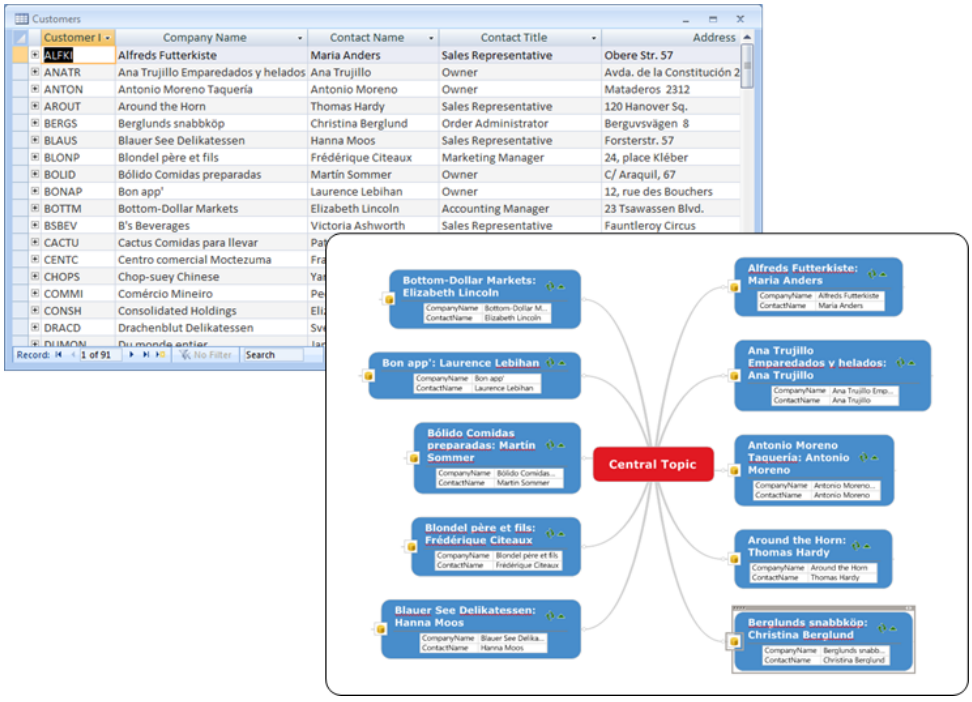


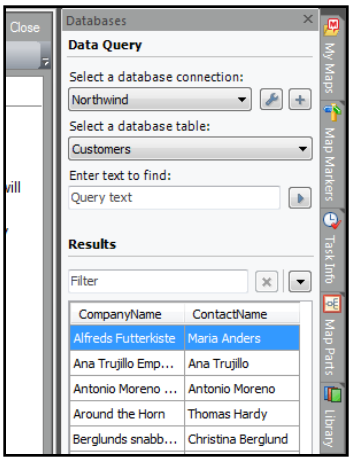
Figure 1: Table Data Represented as a Map

MindManager 8 allows users to connect to the following data sources:

- Microsoft Access
- Microsoft SQL Server
- Microsoft Excel
- Text Files (*.txt/*.csv)
- MySQL*
- Oracle*
- DB2*

*MySQL, Oracle, and DB2 database connections are available but not officially supported database types.

1.2 Get Data



Once a user establishes a connection to one of the supported databases, MindManager 8 users will be allowed to retrieve data from the database simply by selecting a table.

When the table is selected, MindManager 8 will retrieve and display the contents of the database table in the Results section of Database Linker task pane (pictured at right).

By default, only the first two of columns of the table will be displayed, but the user can choose which columns to display.

Furthermore, after the data has been retrieved, users can find specific database rows by applying a text filter simply by entering key words into the Filter field.

1.3 Map Data

Once the user has retrieved that database data using MindManager, users can begin to add the database data to their map. Users can:

- Individually add a specific row by dragging and dropping a database row into the map
- Create a new topic with all or parts of the data mapped as sub topics.
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1.3.1 Related Data

Once data from a database has been added to your map, users may have the ability to lookup related data from another table.

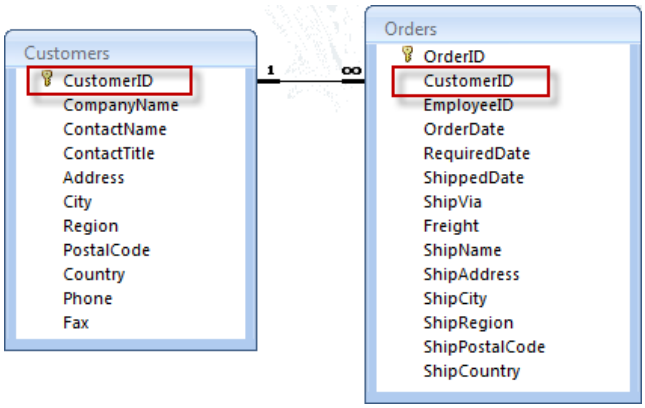


Figure 2: Customers and Orders Tables Joined by CusotmerID

For example, in the above illustration, you can see that the Customers and Orders table are joined by the CustomerID.

By establishing a relationship between the two tables, users that have selected a particular customer can lookup the customer's orders because of the relationship. In MindManager 8, the result of adding a customer and looking up order data might look like:

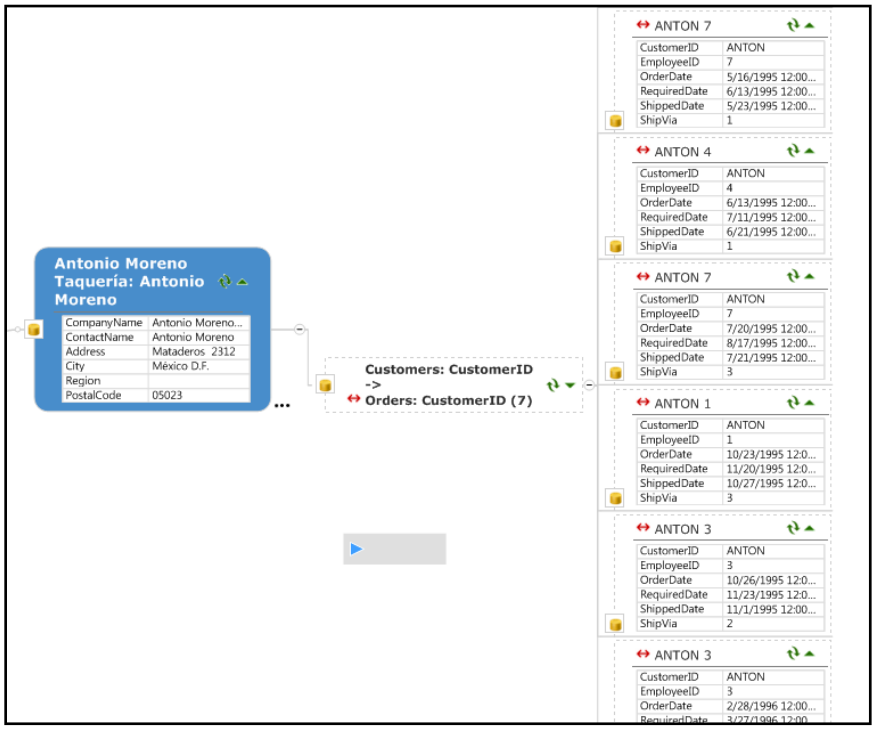


Figure 3: Customers and Orders from a Database in MindManager 8

1.4 Visual Mapping

Once you have added data from your database into your map, you can begin to work with the topics as you do any other MindManager topic. This gives you the ability to completely incorporate the database data into your work. You can:

- Move topics around in your map
- Apply formatting
- Add markers
- Create relationships to/from the topic

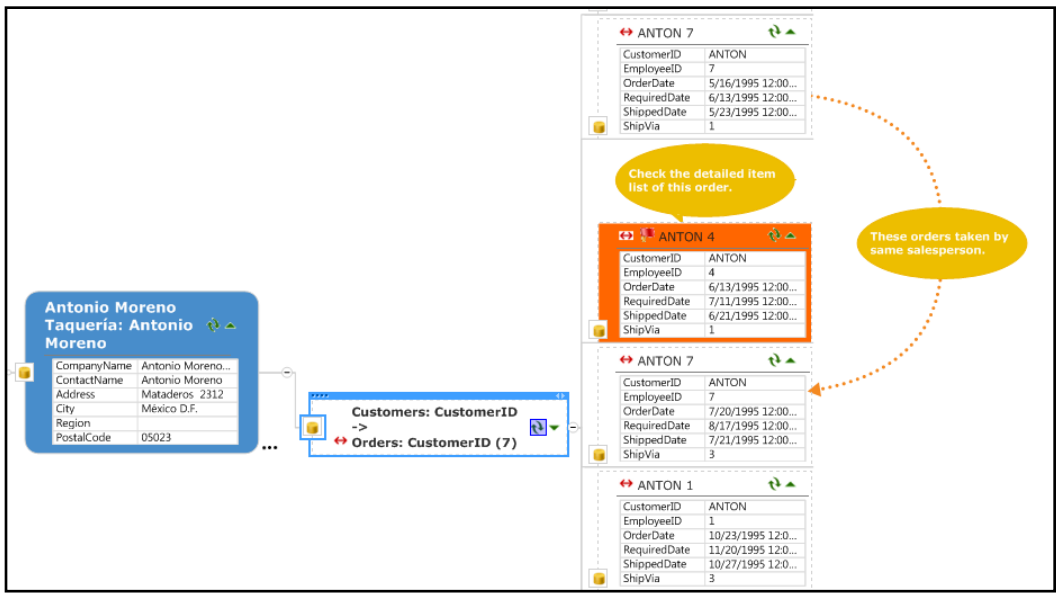


Figure 4: Visual Elements Added to Mapped Database Data

2 Tutorial

2.1 Overview

The below tutorial is a simple walkthrough of all the features of the database linker. The sample database it uses from Microsoft is the same as the sample database included in MindManager 8. Sections 2.2 and 2.3 are meant to show you how to add your own database using the sample.

2.2 Download Sample Database

See document: details.aspx

This tutorial will use the Microsoft Access Northwinds sample database. The Northwinds database has a series of customer, order, products, and shipper tables that will be used to demonstrate the database capabilities of MindManager 8.

Complete the following steps to download and install the Northwind database:

1) Open the following URL in your favorite web browser and follow the instructions there to download and install the Northwind database:

   http://www.microsoft.com/downloads/details.aspx?familyid=C6661372-8DBE-422B-8676-C632D66C529C&displaylang=en

2.3 Connect

A database connection links MindManager to a data source (database or folder of CSV files). This allows you to browse the data source and add content to your maps.

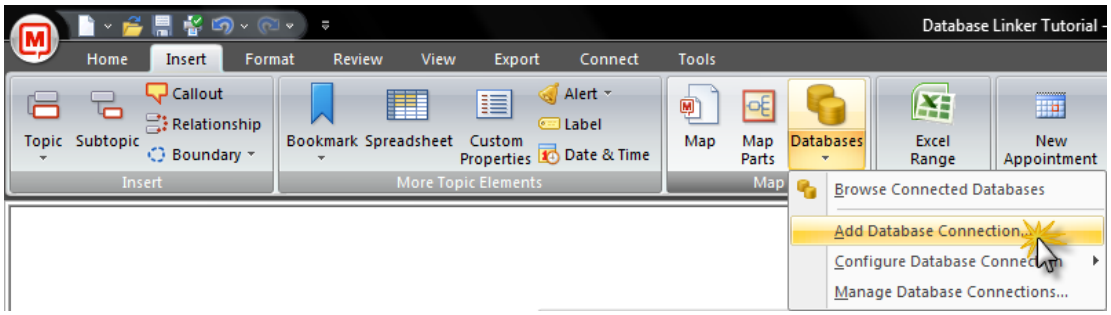
You can connect to the following database types:

- Microsoft Access
- Microsoft Excel
- Microsoft SQL server
- MySQL server
- Comma separated Values (a folder of CSV files in which every file is treated as a table)

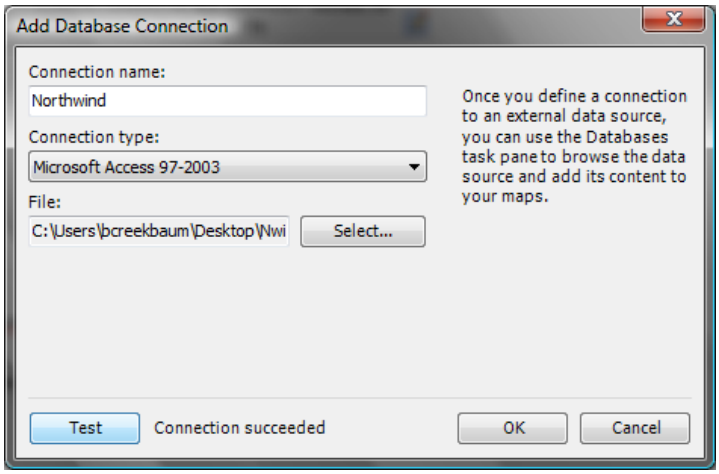
You can create connections to multiple databases.

Add a database connection

1) On the Insert tab, click Databases, and then click Add Database Connection.



2) Enter Northwind in the Connection Name field.
3) Select Microsoft Access 97-2003 from the Connection Type pull-down list.



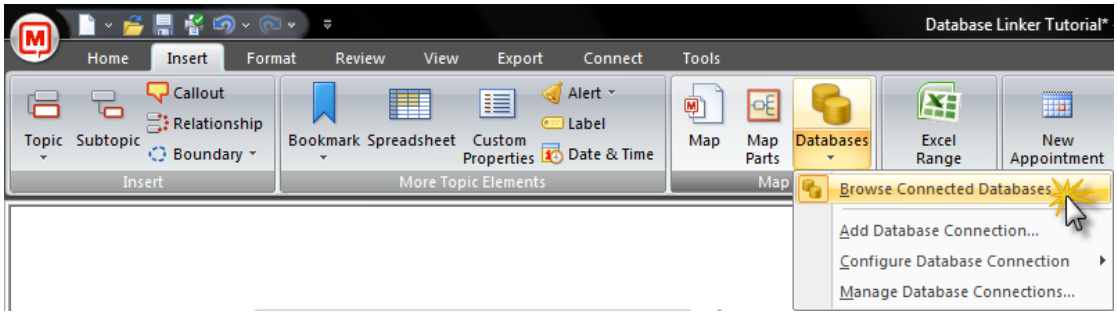
4) Click Select to browse to the database location (Folder, File, or Server name).
5) Click Test Connection to verify that MindManager can connect to the database.
6) Click the OK button.

2.4 Configure

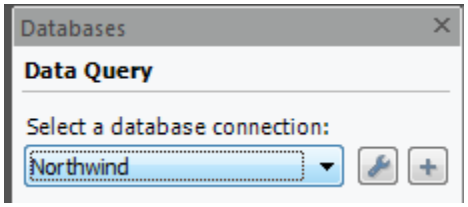
Configuring a MindManager database connection is an optional step that lets you set the visibility of database fields and tables and create relations between database tables for the connection. If you do not configure the connection, you will be prompted for the necessary information when you add a database topic to your map that uses this connection.

When you choose a connection to configure, you'll see the database Configuration View, with the database structure of the selected connection shown in map form, and a document bar with commands for setting field and table visibility, and for creating relations between data. You'll also see any configuration information for this connection that you have already saved.

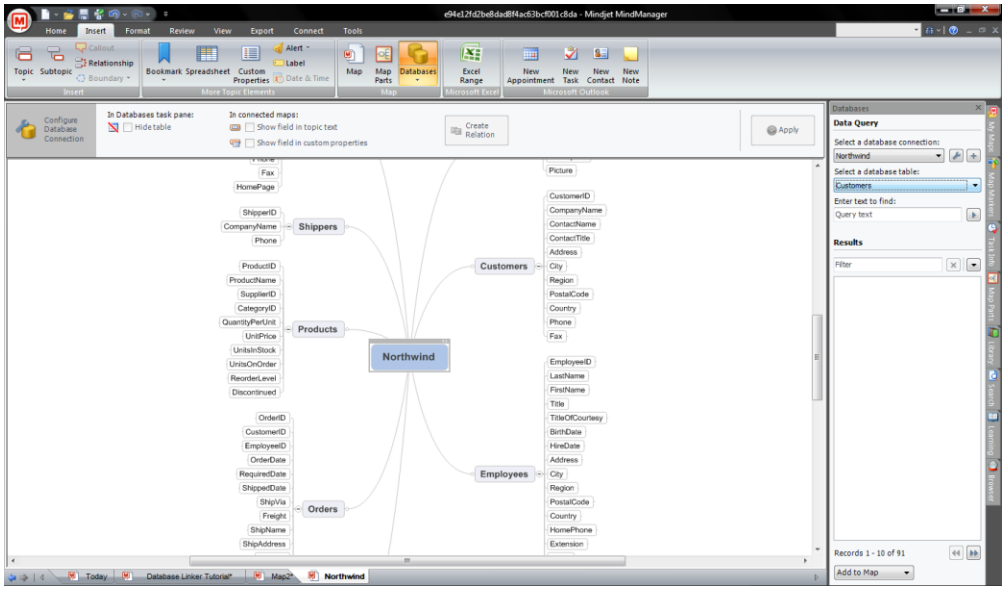
1) On the Insert tab, click Databases, and then click Browse Database Connections.



2) Select Northwind from the Select a Database Connection pull-down list.

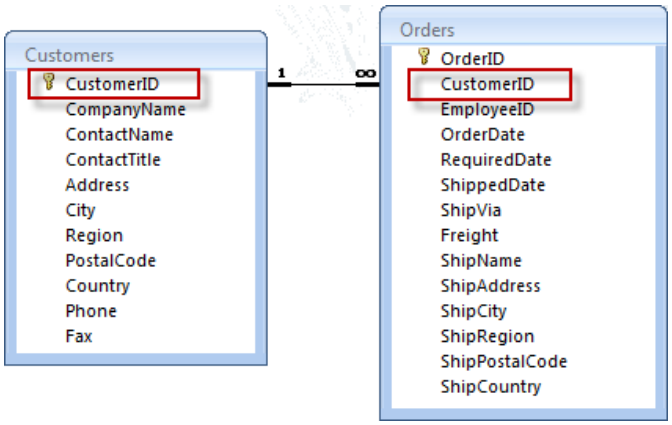


3) Press the Configure Connection button. 
A map will open that represents the structure of the database that you have connected to. In this example, you will see 8 tables as main topics and each of the table's columns represented as sub-topics.

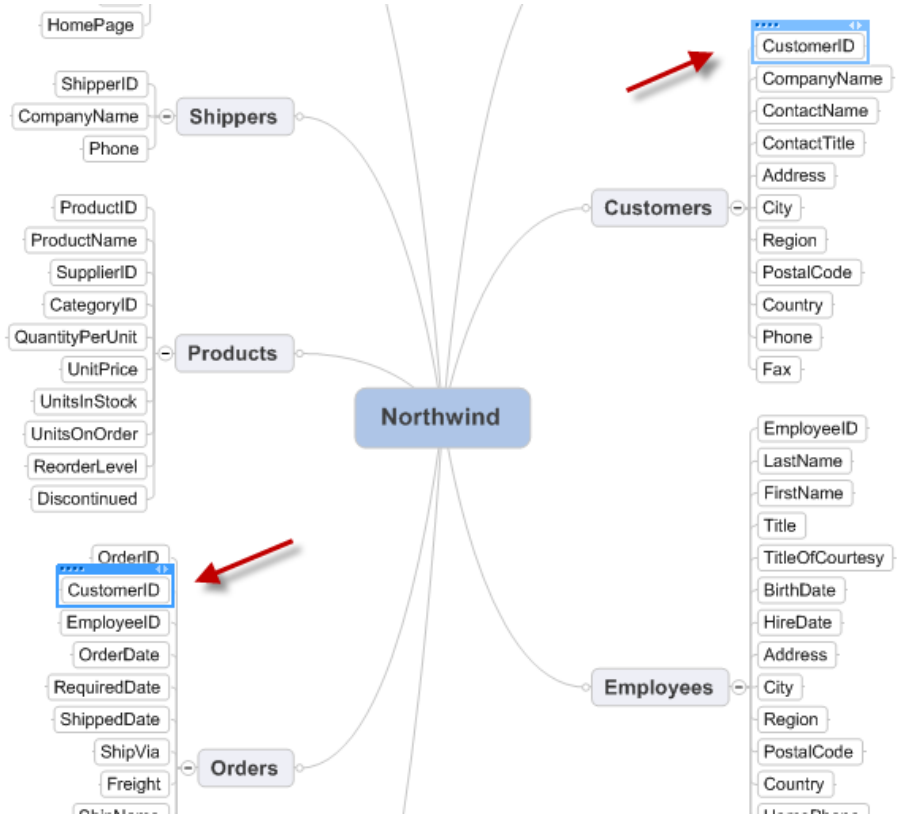


In the Northwind sample database, there is a relationship between the Customers and Orders tables, linked together by the CustomerID field. In the illustration below, there is a one-to-many relationship between the CustomerID field in the Customers table and the CustomerID field in the Orders table

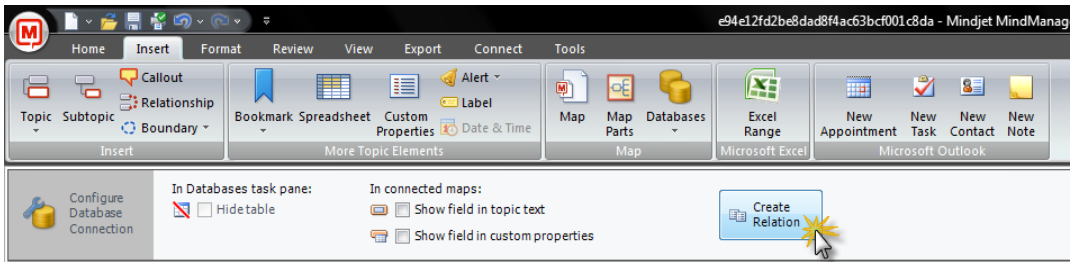
(indicating that there is only one instance of the customer in the Customers table and multiple orders for the customer in the Orders table).



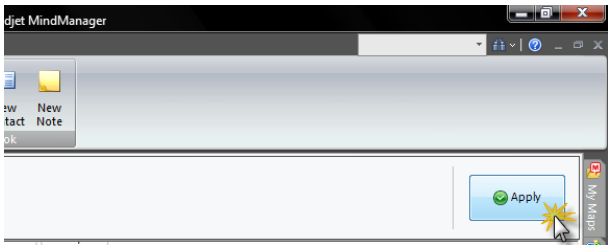
4) Let's create the same relationship for MindManager.
5) Click on the CustomerID topic in the Customers branch.
6) Press the <CTRL> key and click on the CustomerID topic in the Orders branch.



7) Press the Create Relation button below your ribbon toolbar.



8) Press the Apply button.

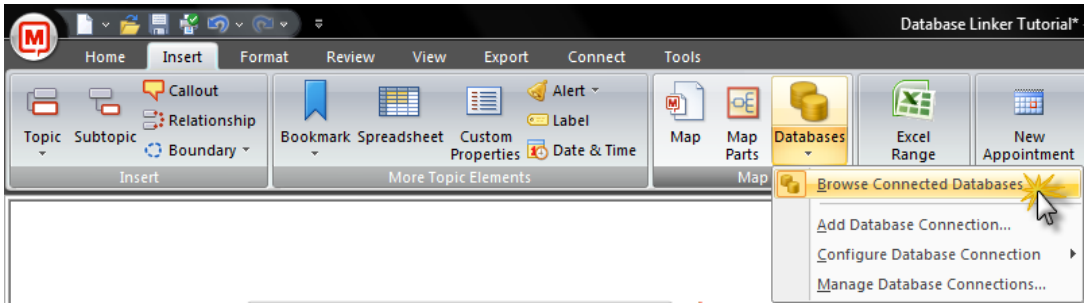


9) Save and close.

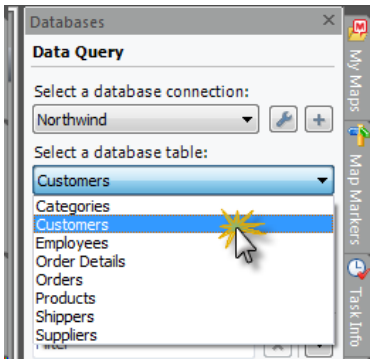
2.5 Get Data

The Databases task pane lets you browse or search a database (run a query), select a set of records from the results, and then add the selected data to your map as database topics.

1) If the Database pane is not open, click on the Insert tab, click Databases, and then click Browse Database Connections.

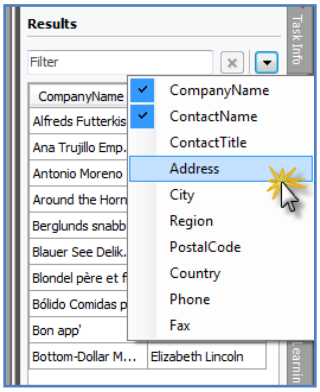


2) In the Databases task pane, select the Northwind database from the Select a database connection pull-down list.
3) Select the Customers table from the Select a database table pull-down list.



All the records in the table now appear in the Results pane. By default, only the first two columns of the table are displayed in the Results pane. To adjust which columns are displayed or to display more than two columns, press the Down Arrow button and select which columns that you would like to display.

4) Press the Down Arrow button and select Address.

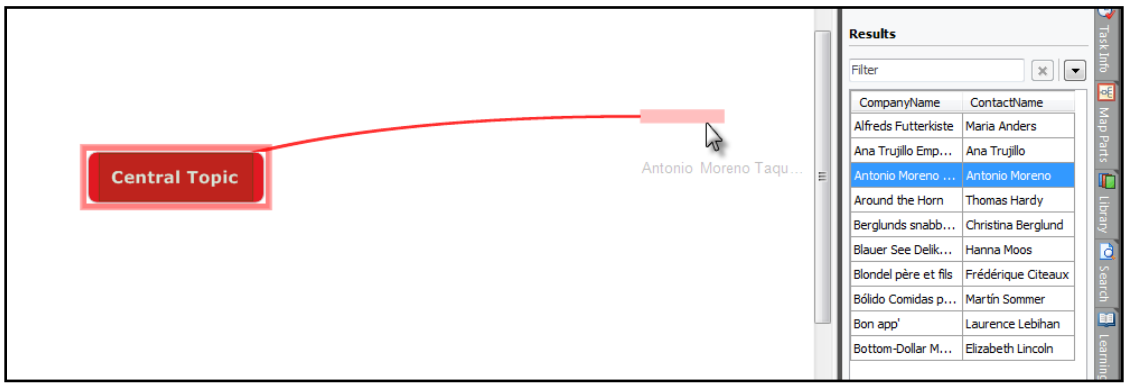


To search for records with matching text, type it in the Enter text to find field. Matching records appear in the Results pane.

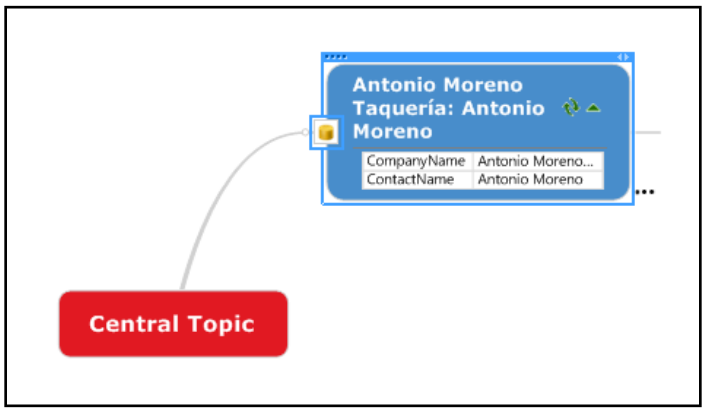
To further refine the Results, enter text in the Filter field. You can enter multiple terms in this field, separated by spaces. The Results will now be reduced to records that contain at least one of the filter terms in any of their fields. To remove the filter, click .

2.6 Add Data to your Map

1) Select the Antonio Moreno Taqueria row.
2) Drag the row from the Results pane into your map.



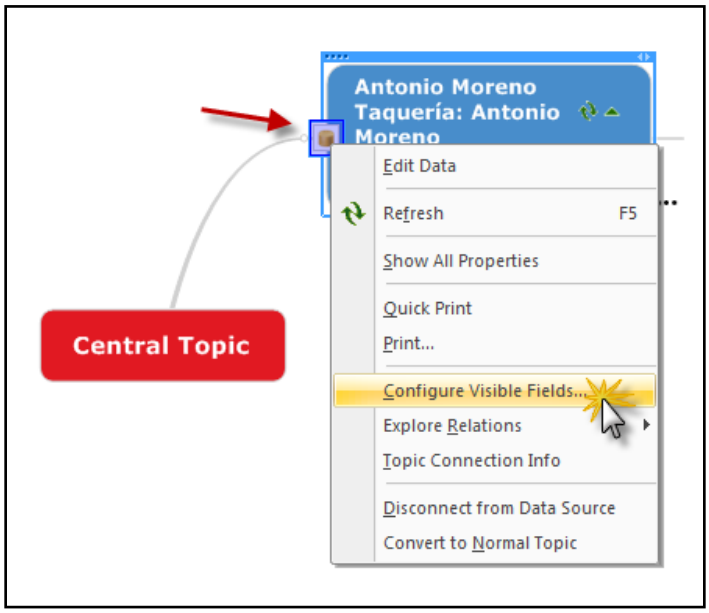
A topic with the database data will be added to your map.



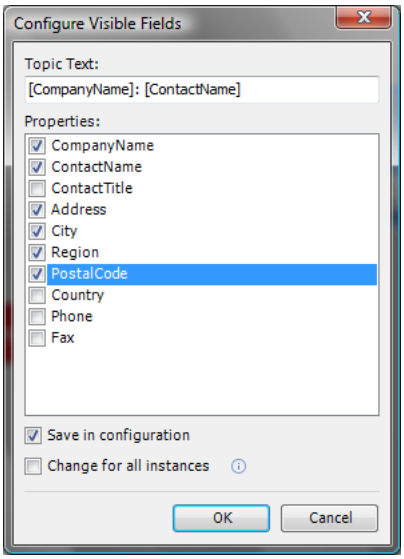
You will notice that the topic contains two sections of data:

- Topic Text: This will default to the first two columns of data (this can be changed later).
- Custom Properties: This will also default to the first two columns of data and can also be changed. This is the ideal place to display more database details.

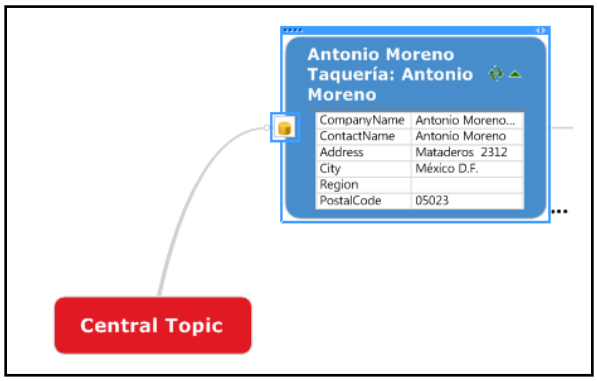
3) Right-click on the database icon in the topic and select Configure Visible Fields.



4) Enable the following checkboxes:
   - Address
   - City
   - Region
   - PostalCode



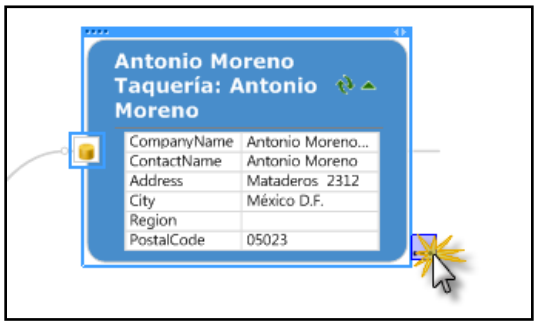
5) Enable the Save in configuration checkbox (this will ensure that other topics added to the map will also display the same set of data).
6) Press the OK button.
   You will notice now that the Antonio Moreno Taqueria topic has an expanded set of data in the custom properties:



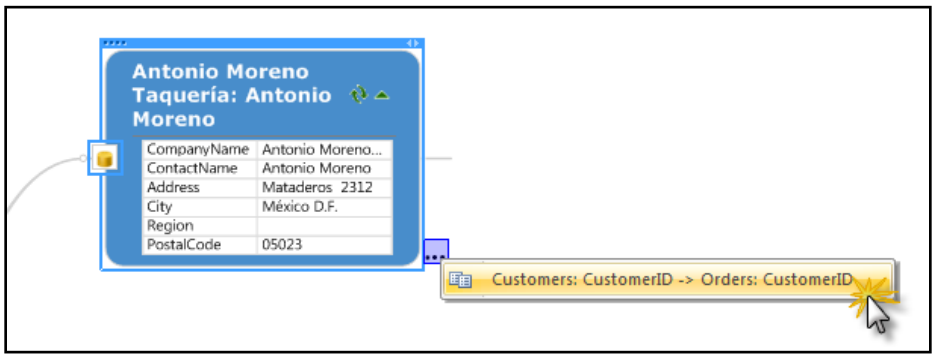
2.7 Lookup Related Data

If you look closely, you will see that there is an elipse (3 dots) icon. This presence of this icon indicates that there is a relationship associated with this record and that related data can be looked up.

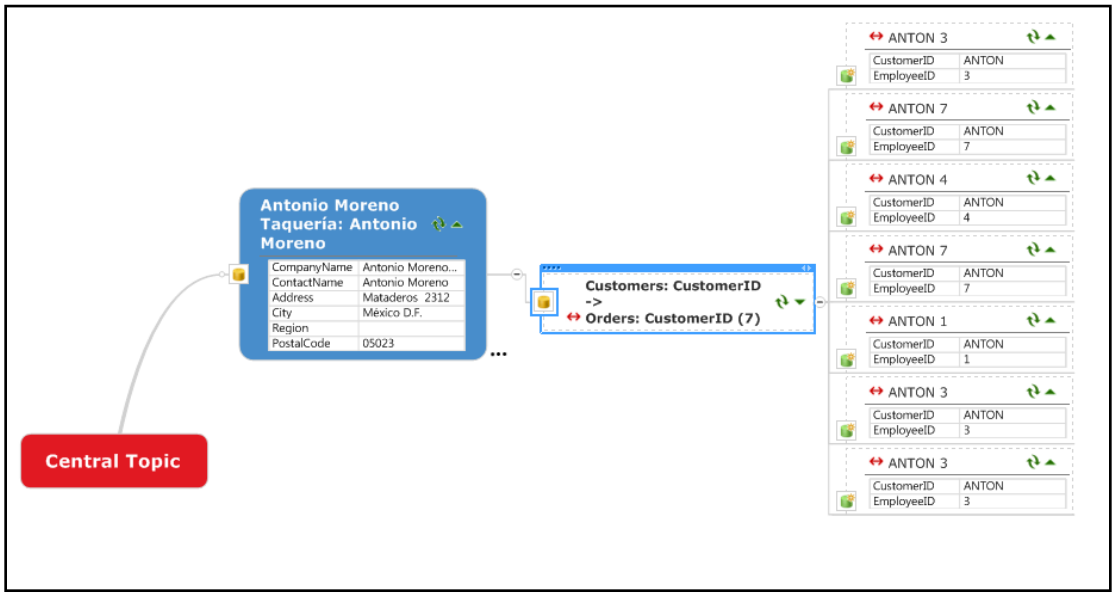
1) Press the elipse icon.



2) Select the Customers:CustomerID -> Orders:CustomerID relationship.

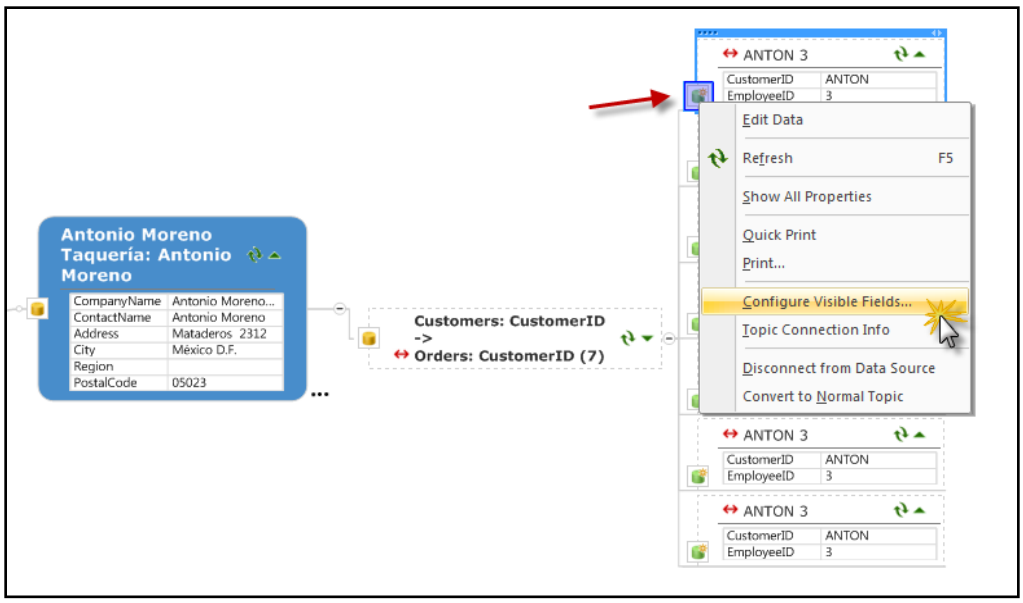


The related orders will be automatically added to your map, connected to the Antonio Moreno Taqueria topic:

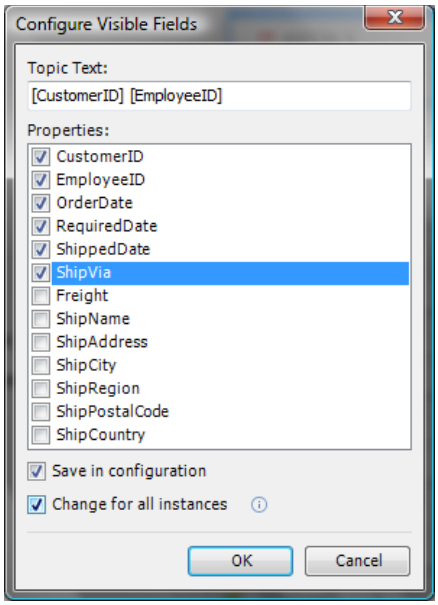


As before, only the first two columns of the Order table are displayed. Let's expand the displayed data.

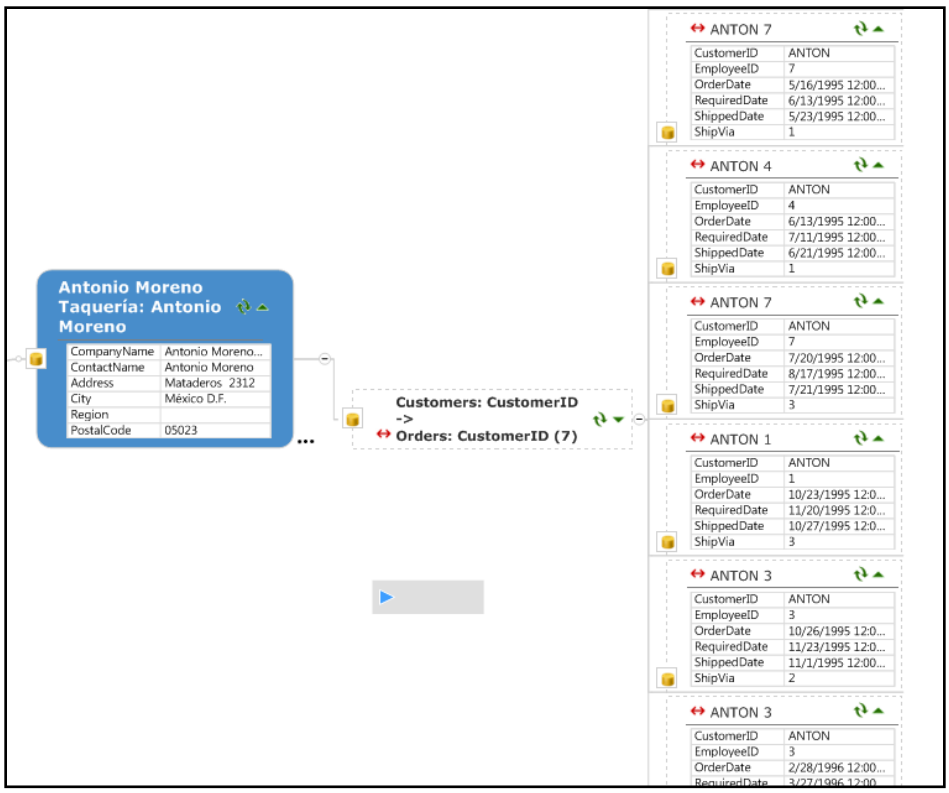
3) Right-click on the database icon of the Anton 3 topic and select Configure Visible Fields.



4) Enable the following checkboxes:
   - OrderDate
   - RequiredDate
   - ShippedDate
   - ShipVia



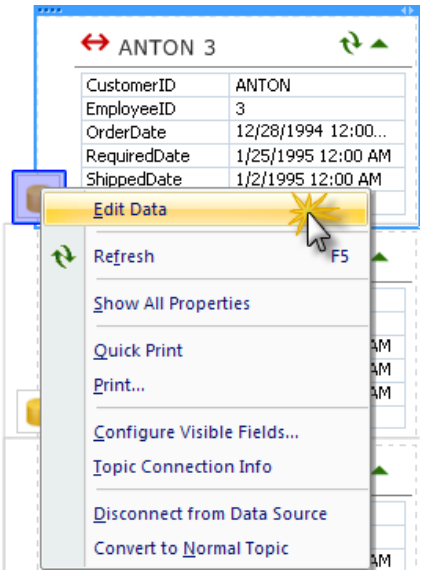
5) Enable the Save in configuration checkbox.
6) Enable the Change for all instances checkbox (this will update the displayed data for other database records already added to your map).
7) Press the OK button.



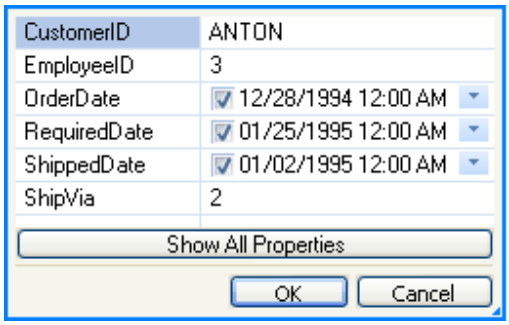
2.8 Edit Data

MindManager 8 Database Linker gives the user the ability to edit data in the database which can then refresh the database table. Likewise, if the connected database table is edited, the MindManager topic will reflect this change.

1) Right-click the database icon on the topic ANTON 3 and choose Edit Data.



2) Properties in the topic can now be edited.


CustomerID
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OrderDate
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