Worked example - using a scripts folder as a data source

This worked example demonstrates the use of a scripts folder when comparing and deploying databases. A scripts folder contains SQL script files representing a database's structure and, optionally, data.

For more information, see: Working with scripts folders.

In the example, the Super Sprocket Company has a SQL Server database that contains a number of tables, views, stored procedures, and other database objects. The Super Sprocket Company's development team has been given the task of making a number of changes to the structure of the database and updating the production server.

A copy of the production database has already been restored to an empty database, ready for development. To ensure no untested changes are made to the production database, they will also save its schema as a scripts folder.

You can follow the example on your own system, if you are using SQL Compare Professional edition. You will need access to a SQL Server to do this.

If you have not already followed the Comparing and deploying two databases worked example, you are recommended to do so before starting this worked example.

This example has four steps:

1. Set up the databases
   Create the example databases on your SQL Server.
2. Set up the comparison
   Specify the data sources you want to compare.
3. Select objects to deploy
   Review the results and select the objects you want to deploy.
4. Create a deployment script
   Create a script to update the production database.

> ⚠ You can only compare scripts folders if you are using SQL Compare Professional Edition.

1. Set up the databases

The worked example uses the following databases:

- *SprocketProduction* is the production database
- *SprocketDevelopment* is the modified version of the database containing the updates

To create these databases on your SQL Server:

1. If they already exist, delete the databases **SprocketProduction**, and **SprocketDevelopment** from your SQL Server.
2. Click here to download the SQL creation script for the databases.
3. Copy the script, paste it in your SQL editor, and run it.
   The databases and their schema are created.

2. Set up the comparison

Development on the copy of the production database proceeds, and at some point a milestone is reached; the next version is ready to be tested. The development team compares the modified database with the production database schema. To ensure no untested changes are made to the production database, they save its schema as a scripts folder.

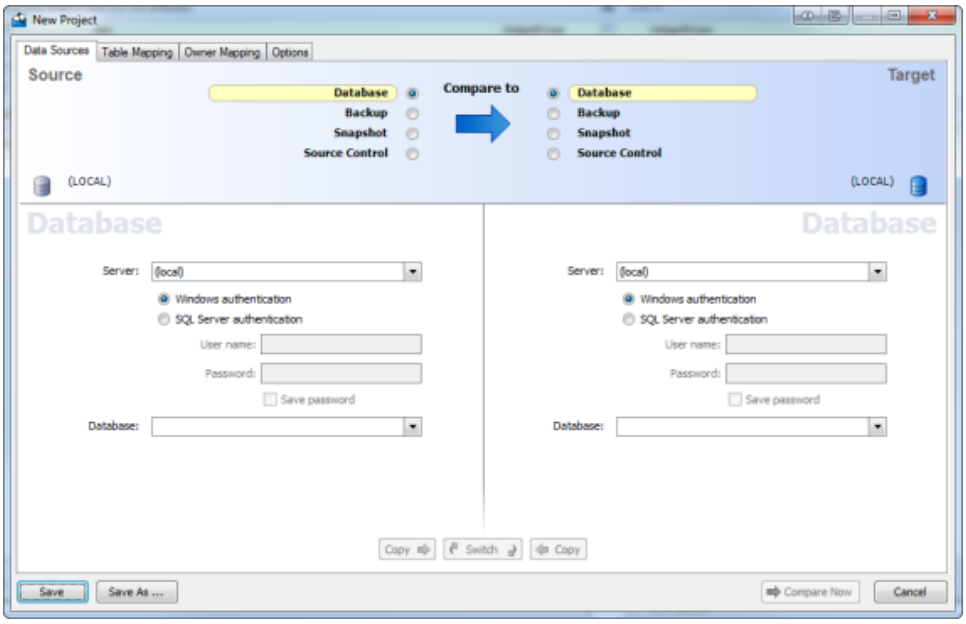
Creating a scripts folder before deployment preserves the current state of the production database. It can be checked into source control, providing history and allowing you to revert any changes.

To do this, set up a comparison project:

1. Click  (New Project).

   If an unsaved project is currently open, you will be prompted to save when you click 

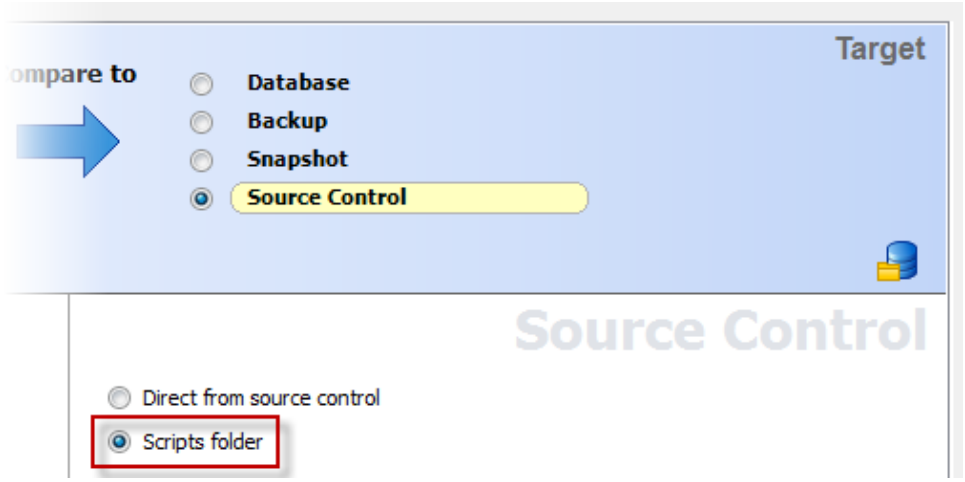
   The Project Configuration dialog box is displayed:



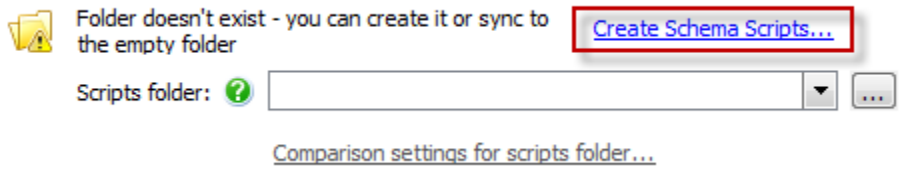
2. Under Server, select the server you're using.
3. Under Source, select *Database*, and in the **Database** box type or select *SprocketDevelopment*.

   SprocketDevelopment is the new version of the database, following a development cycle.

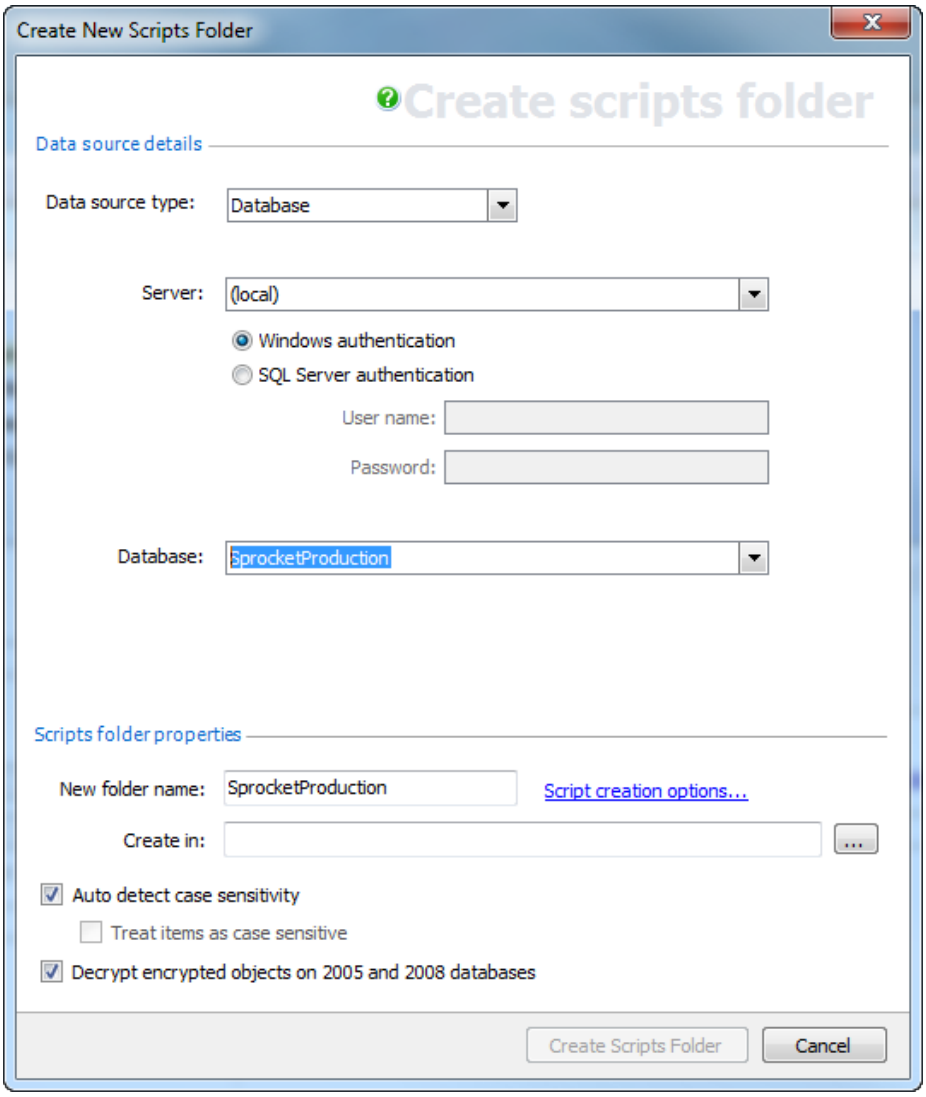
   You must now create a scripts folder representing the schema of the production database.
4. Under Target, select *Source Control*, then select **Scripts folder**:



5. Click **Create schema scripts**:



The **Create New Scripts Folder** dialog box is displayed:



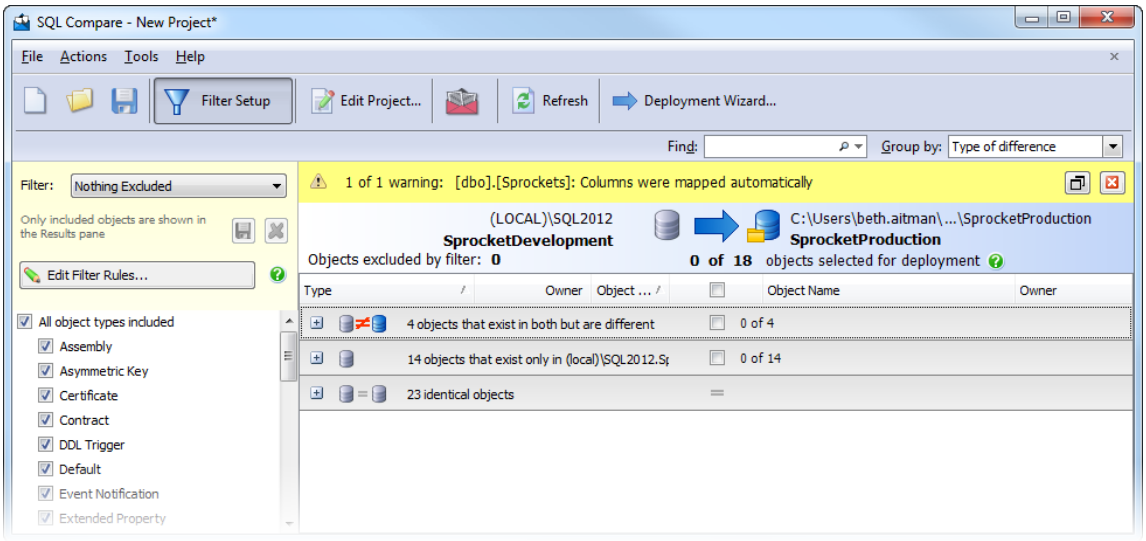
6. Ensure that the **Data source type** is set to *Database*.
7. Type or select *SprocketProduction* in **Database.**
   If the database is not displayed in the **Database** list, right-click in the **Database** box and click **Refresh**, or scroll to the top of the list and click **Refresh**.
8. Click in the **New folder name** box. SQL Compare automatically supplies a name for the scripts folder.
   The default value is the name of the data source.
   In this example, use the default name *SprocketProduction*.

   In **Create in**, type the path for the folder you want to create, or click  **Browse** to browse to its location.
9. If you are using a source control system, this may be the folder designated as your working folder.
10. Click **Create Scripts Folder.**
    The schema is saved in the specified folder as a set of object creation script files.
    The folder you created is now shown as the target of the comparison on the Project Configuration dialog box.
11. Click **Compare Now**.

A message dialog box is displayed. If you selected the **Close dialog box on completion** check box last time you ran a comparison, SQL Compare closes this message dialog box automatically.

3. Select objects to deploy

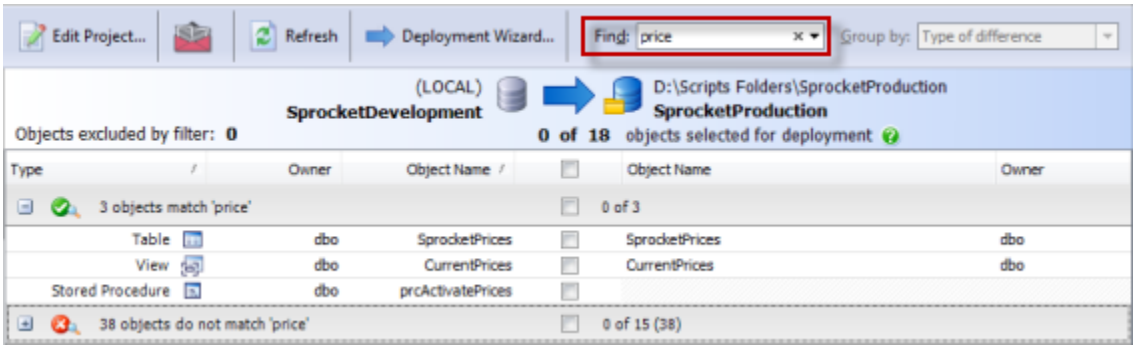
The comparison results are displayed in the main window:



To update the production database, you must create a deployment script. Verify that all the objects you want to modify are present in the comparison results, and select them for deployment.

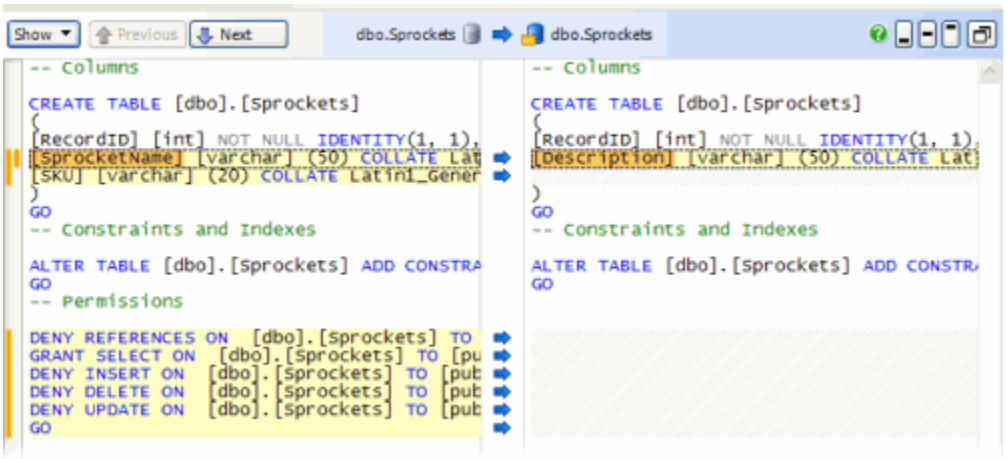
To search for objects, type the search text in the **Find** box. SQL Compare searches object names and owner names.

In this example, search for all objects that contain "price" by typing *price* in the **Find** box.



The objects are now grouped by whether they match or do not match the find text. To clear the **Find** box, click the ✕ button; all the objects are displayed.

You can view a side-by-side, color-coded listing of the differences in the object creation scripts, by clicking an object. For example, if you click the *Sprockets* table, you can see the differences for this table:



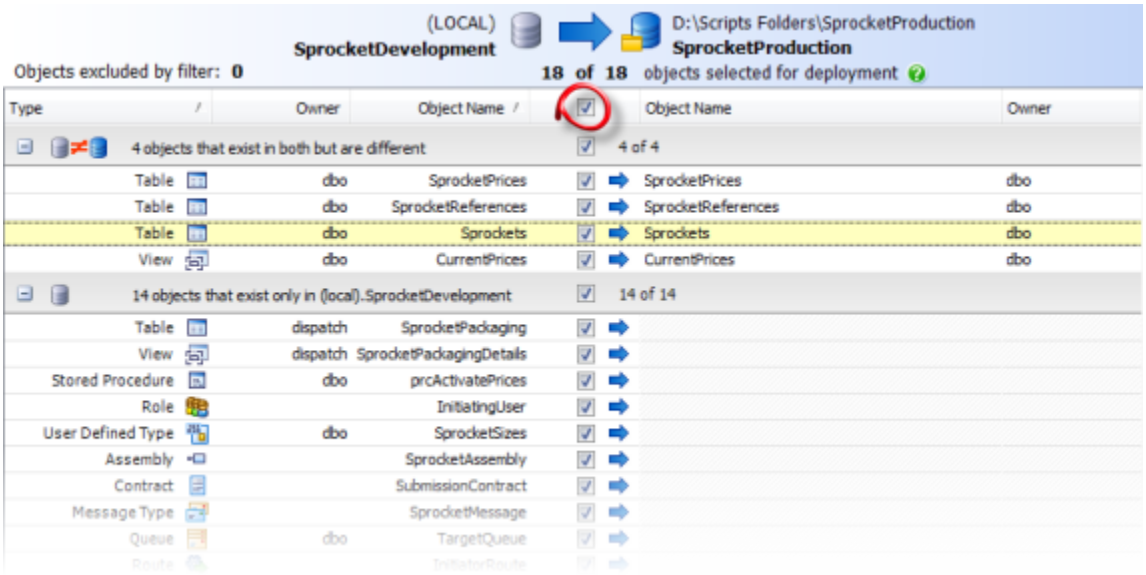
The two versions of the line are shown one on top of the other in the Line Differences bar. This is especially useful when the lines are too long to view all the text; you can see more of each line in the Line Difference bar. If the Line Differences bar is not displayed, click Show and select **Line Differences**

For full details of how to use the comparison results window, see:

- Viewing the comparison results
- Viewing the SQL differences

In this example we will deploy all objects.

In the central column of the upper (Results) pane, select the top level check box to include all objects in the deployment:



4. Create a deployment script

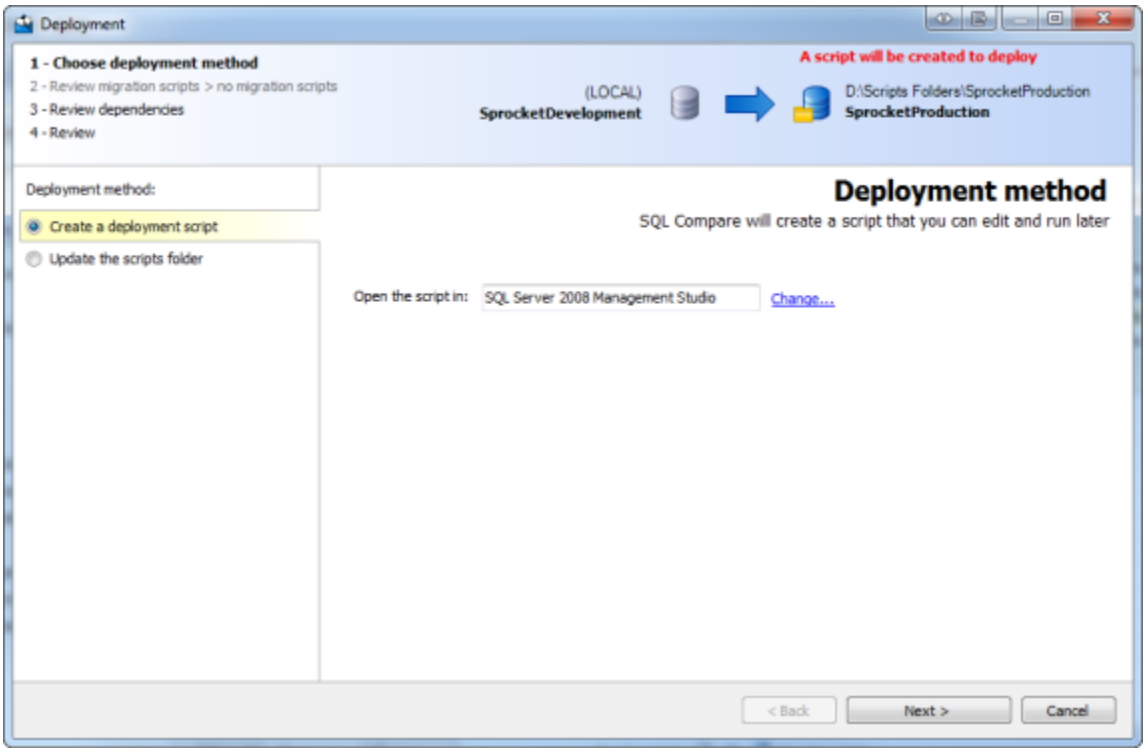
When you have selected the objects to deploy, click  **Deployment Wizard**.

1. Choose deployment method

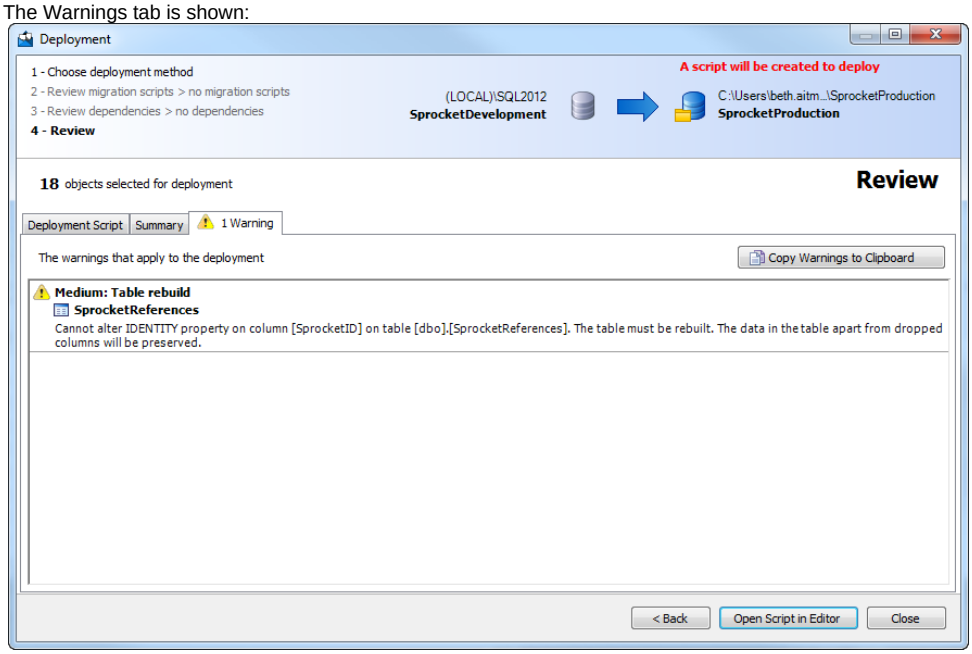
When a scripts folder is the target, you can:

- Create a deployment script to update the database from which the scripts folder was created
- Modify files in the scripts folder directly

In this example, we will create a deployment script. The script can then be run on the production database to update it with the development changes.



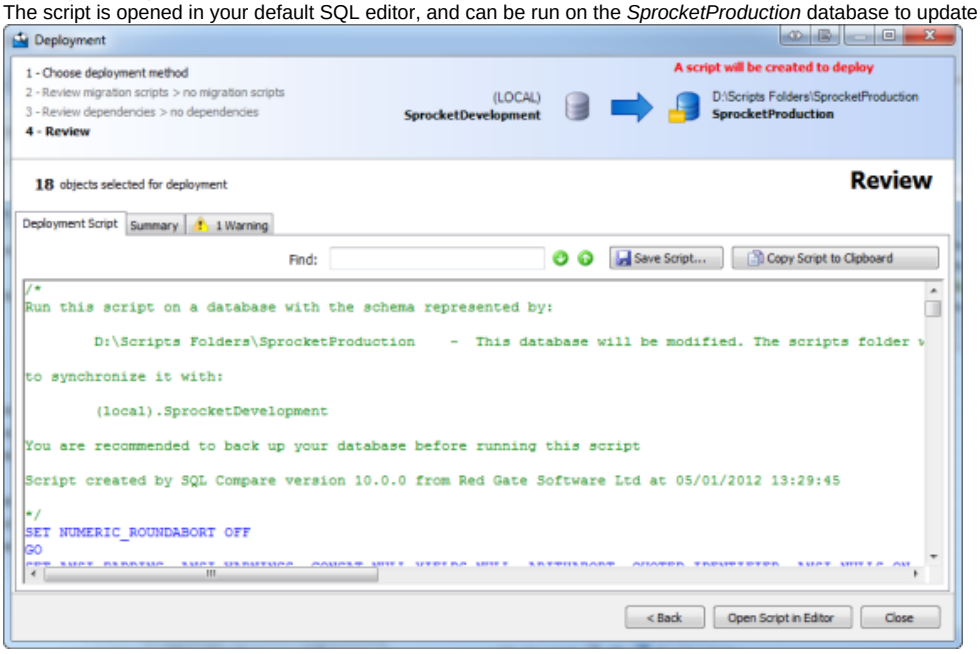
1. Ensure that **Create a deployment script** is selected.
2. Click **Next**.
   The Warnings tab is shown:



2. Review script

When you have reviewed the script, you can open it in your SQL editor, or save a copy of the script.

1. Click **Open Script in Editor**.
   The script is opened in your default SQL editor, and can be run on the *SprocketProduction* database to update it with the development changes:



2. Run the script.
   To verify that the deployment was successful, set up a new project comparing *SprocketDevelopment* and*SprocketProduction.*

   If you have not saved the project, you will be prompted to do so when you click 
   It is not necessary to save the current project.
   As the databases are now identical, *All objects identical* is shown in the direction bar: