How to Generate ERD from DDL?

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For an existing database, an ERD can be generated from its schema through reverse engineering. However, what if your database is not directly accessible for reverse engineering (e.g., for security reasons, the production database cannot be accessed directly)? What is the alternative in this situation?

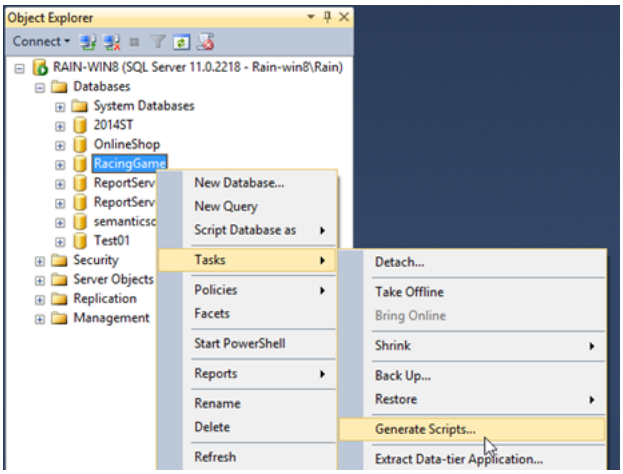
Generating a DDL File from a Database

Most Database Management Systems (DBMS), such as Oracle, Microsoft SQL Server, and MySQL, support exporting a database schema to a Data Definition Language (DDL) file. In this tutorial, you will first learn how to generate a DDL file and then how to reverse engineer that file to visualize your database as an ERD. A video demo is also provided at the end of this tutorial.

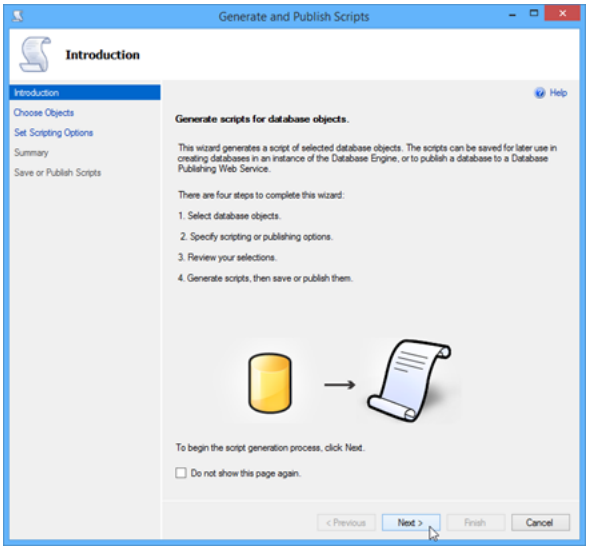
Microsoft SQL Server will be used as an example throughout the tutorial. To generate a DDL file for your SQL Server database:

1. Open **SQL Server Management Studio** and connect to your database.

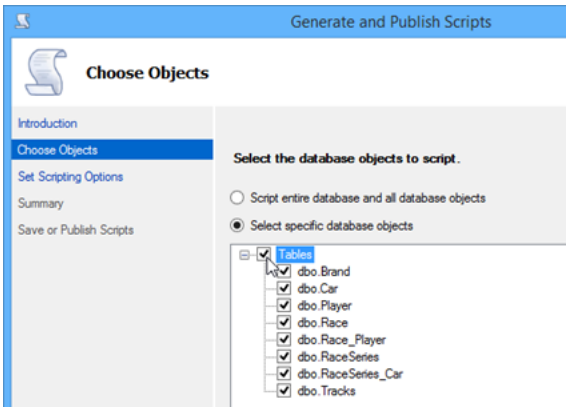
2. Right-click on the database you want to reverse engineer and select **Tasks > Generate Scripts...**



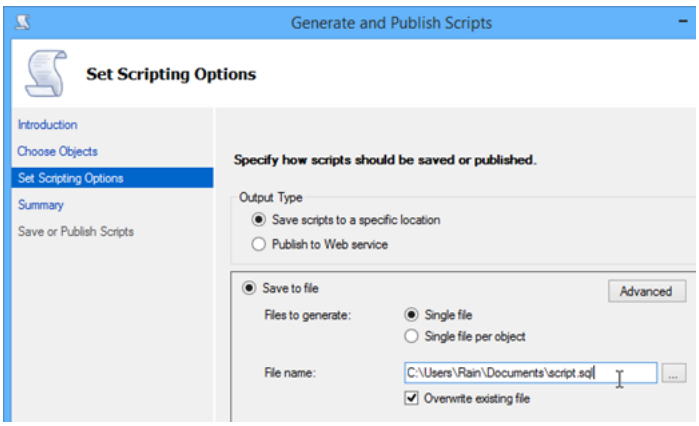
3. Click **Next** in the **Generate and Publish Scripts** dialog.



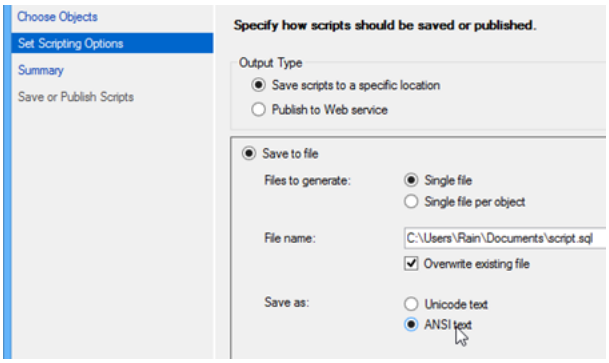
4. Choose **Select specific database objects**, select all **Tables** from the list, and then click **Next** to proceed.



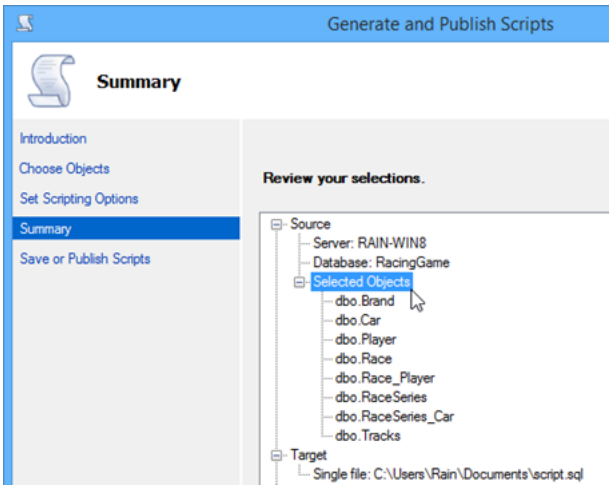
5. Specify the output path for the script file in the **File name** field.



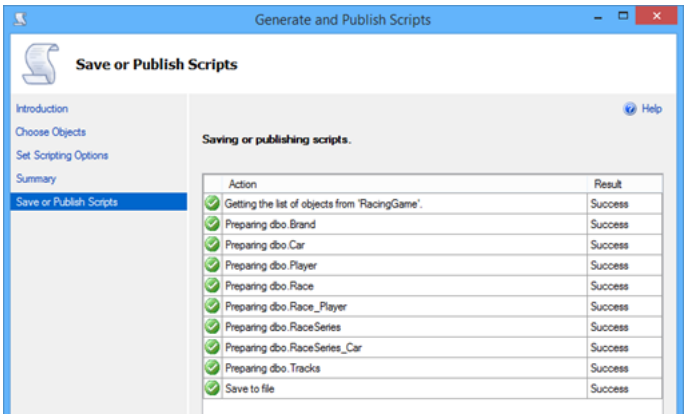
6. Select **ANSI text** in the **Save as** field, then click **Next** to proceed.



7. Review the selection and click **Next** to start generating the DDL script.



8. Click **Finish** when the process is complete.



For Other Popular Databases

MySQL

For MySQL, the database schema can be exported using the command with the following arguments:

This command will extract the schema of your specified database into a script file at the path you specified.

Oracle

For Oracle, the database schema can be exported using the command (Data Pump) with arguments like these:

This will extract the specified schema into the dump file path specified by the argument.

PostgreSQL

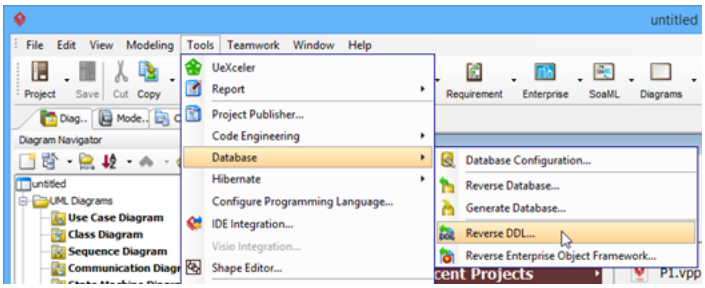
For PostgreSQL, the database schema can be exported using the command with the following arguments:

This will extract the schema of your specified database into a script file at the path you specified.

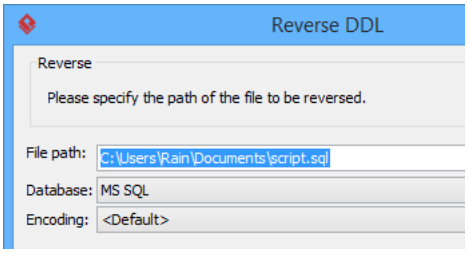
Reverse Engineering a DDL File into an ERD

Once the DDL file is ready, we can reverse engineer it into an ERD. To reverse engineer your DDL file:

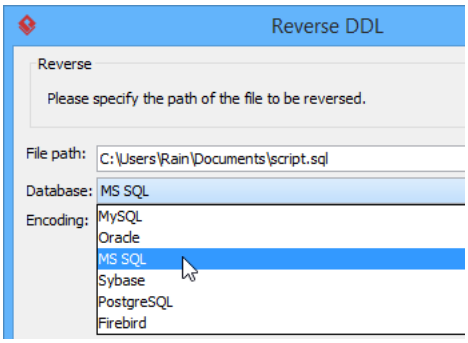
1. Go to **Tools > Database > Reverse DDL...**



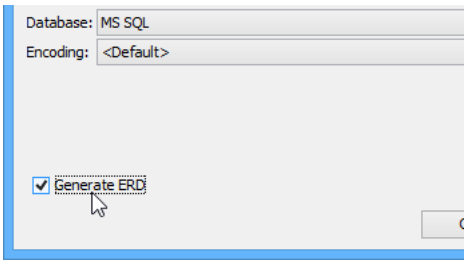
2. Specify the path of the DDL file you exported in the previous step in the **File path** field.



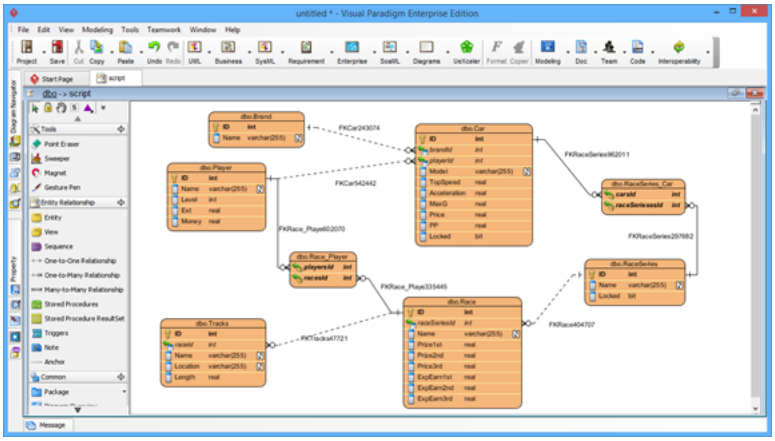
3. Select the source database type from the **Database** dropdown list.



4. Check the **Generate ERD** box to have Visual Paradigm automatically generate the ERD.



5. Click **OK** to proceed. After that, the ERD for your database will be generated. You can then analyze or work with it.



Watch this Tutorial on YouTube

How to Reverse Database Schema into ERD without Connecting to a Database

Related Links

- What is Entity Relationship Diagram (ERD)?
- How to Produce Database Specification
- Database Design tools in Visual Paradigm
- From Data Modeling to Data Dictionary

Visual Paradigm home page
(https://www.visual-paradigm.com/)

Visual Paradigm tutorials
(https://www.visual-paradigm.com/tutorials/)