

## Deploying the EasyCore Database - EasyDB

EasyDB - the EasyCore Database - is based on MS SQL Server.

You can install an instance of the database from a command prompt. Change directory to the "easydb" folder of your EasyCore installation, set the environment variable EASYDB\_NAME to the name you want for the database and run the batch script "deploy\_easydb.bat":

```
Command Prompt - deploy_easydb.bat

C:\Program Files\EasyCopy\EasyCore 3.0.0\easydb>set EASYDB_NAME=ajax_ecdb

C:\Program Files\EasyCopy\EasyCore 3.0.0\easydb>deploy_easydb.bat

-----
This script will deploy EasyDB - the EasyCore database - to your system.

The deployment requires FILESTREAM support to be enabled on the SQL Server.
The folder for file stream data, will be created by this script.

Modify this script or set environment variables before running,
if you do not want to use the default settings.

The current settings are:
  Database name (EASYDB_NAME): ajax_ecdb
  SQL Server   (MS_SQL_NAME): localhost
  File Stream folder      : C:\ProgramData\easydb

WARNING: the database ajax_ecdb will be reset, and any data in it will be LOST.

Do you want to continue [Y/N]?
```

EasyDB will by default be deployed to the localhost where you are running the deployment script.

You can deploy to a different host name by setting the environment variable MS\_SQL\_NAME to the name of your MS SQL Server.

The deployment script is using the SqlPackage.exe tool, which must be available.

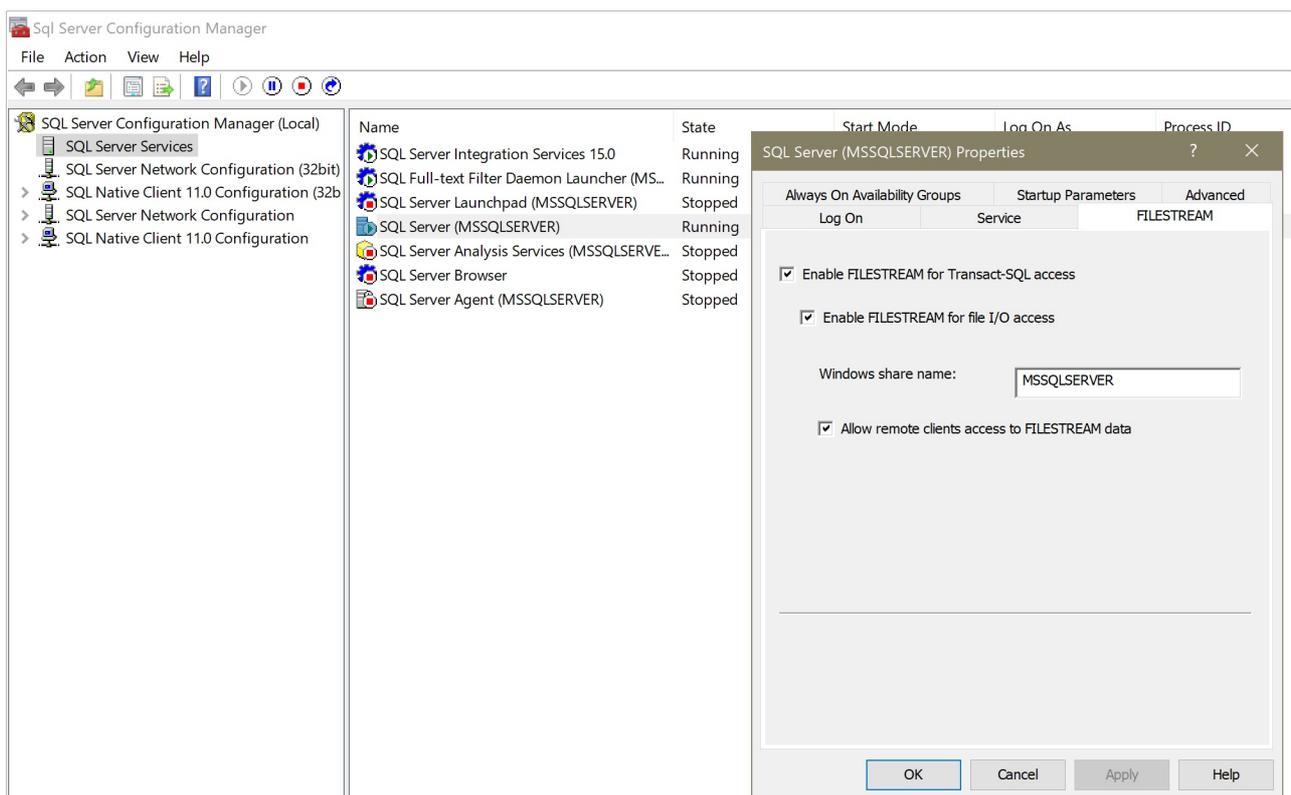
It is part of the DacFramework.msi package, which can be downloaded from Microsoft sites. If installed in a standard location, the deployment script should find the executable.

EasyDB requires FILESTREAM to be enabled on the SQL Server. See next section for enabling FILESTREAM, which should be done before running the deployment script.

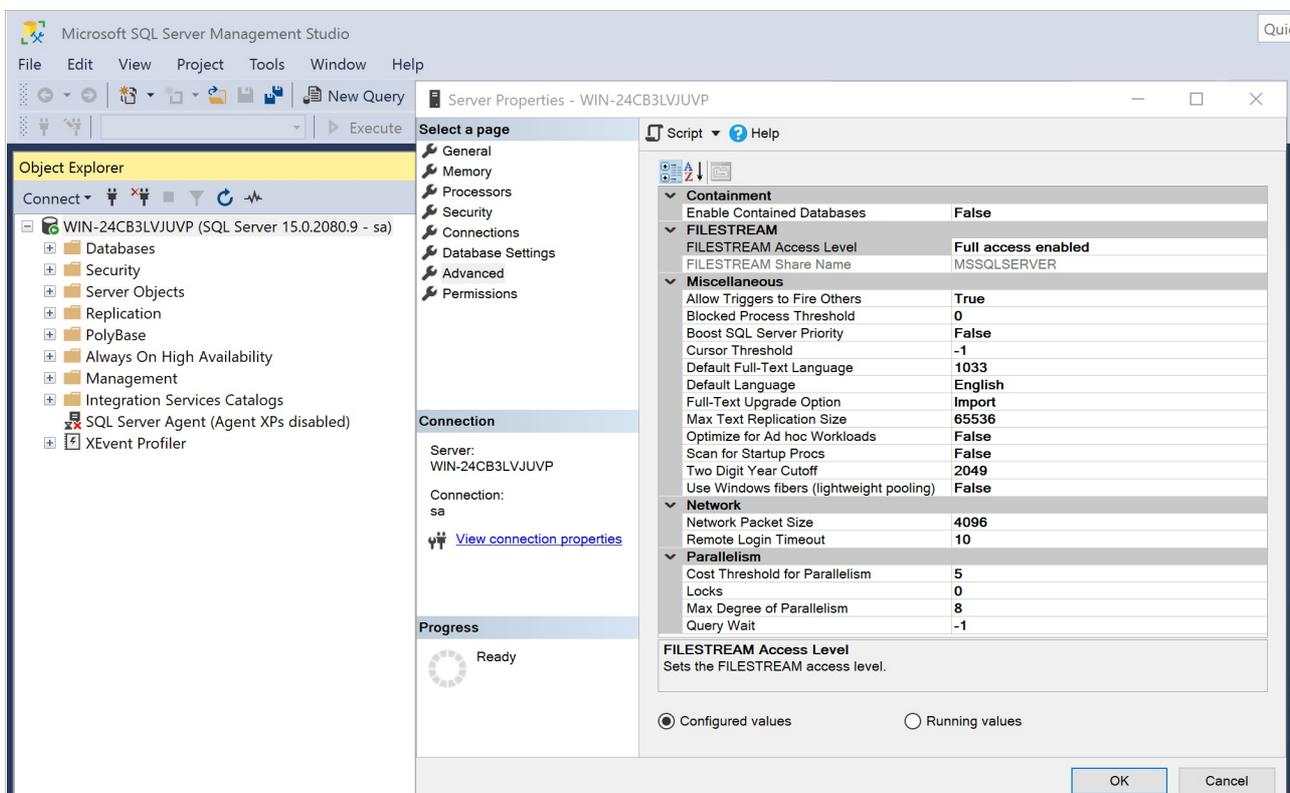
## Enabling FILESTREAM on MS SQL Server

There are two places where you need to enable FILESTREAM.

First open SQL Server Configuration Manager (SQLServerManager15.msc). Select Properties on your SQL Server service, and enable FILESTREAM.



Secondly open SQL Server Management Studio, select Properties, select the Advanced page and set FILESTREAM access level to Full access:

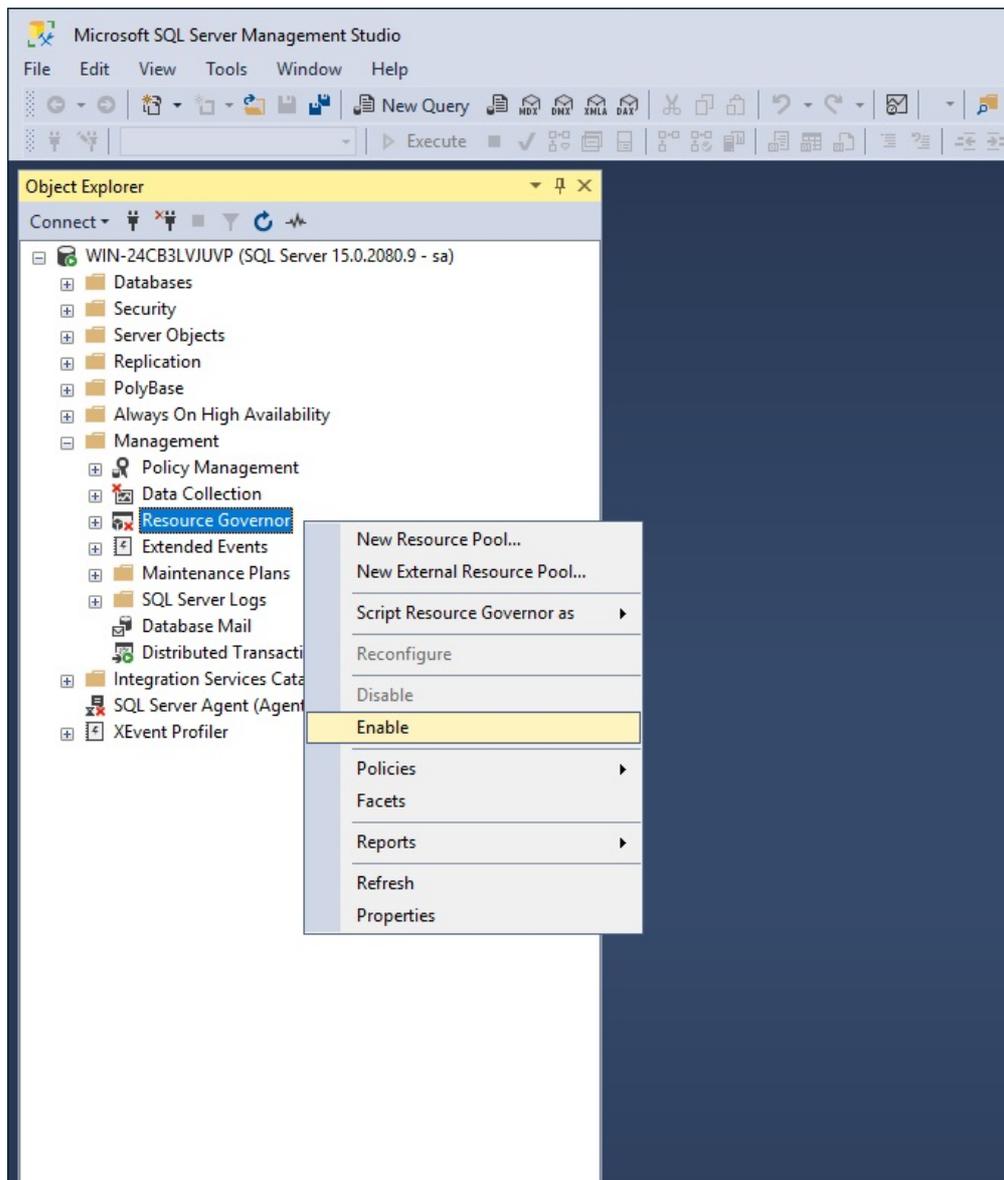


You should restart SQL Server to make sure the changes are in effect.

## Enabling the Resource Governor

For best performance, we recommend that the Resource Governor is enabled on the SQL Server.

This can be done in SQL Server Management Studio by a user with administration rights:



## Bind EasyDB to a resource pool

To avoid possible out-of-memory issues when using EasyDB, it is recommended to bind the database to a resource pool.

The following example shows how to create a resource pool using 25% of the available memory and binding it to the database 'EasyDB1'.

```
-- set MIN_MEMORY_PERCENT and MAX_MEMORY_PERCENT  
-- to the same value
```

```
CREATE RESOURCE POOL Pool_EasyDB  
WITH  
  ( MIN_MEMORY_PERCENT = 25,  
    MAX_MEMORY_PERCENT = 25 );  
GO
```

```
ALTER RESOURCE GOVERNOR RECONFIGURE;  
GO
```

```
-- bind the database to the just created resource pool  
EXEC sp_xtp_bind_db_resource_pool 'EasyDB1', 'Pool_EasyDB'  
GO
```

```
-- make the resource pool binding effective  
ALTER DATABASE EasyDB1 SET OFFLINE  
GO  
ALTER DATABASE EasyDB1 SET ONLINE  
GO
```

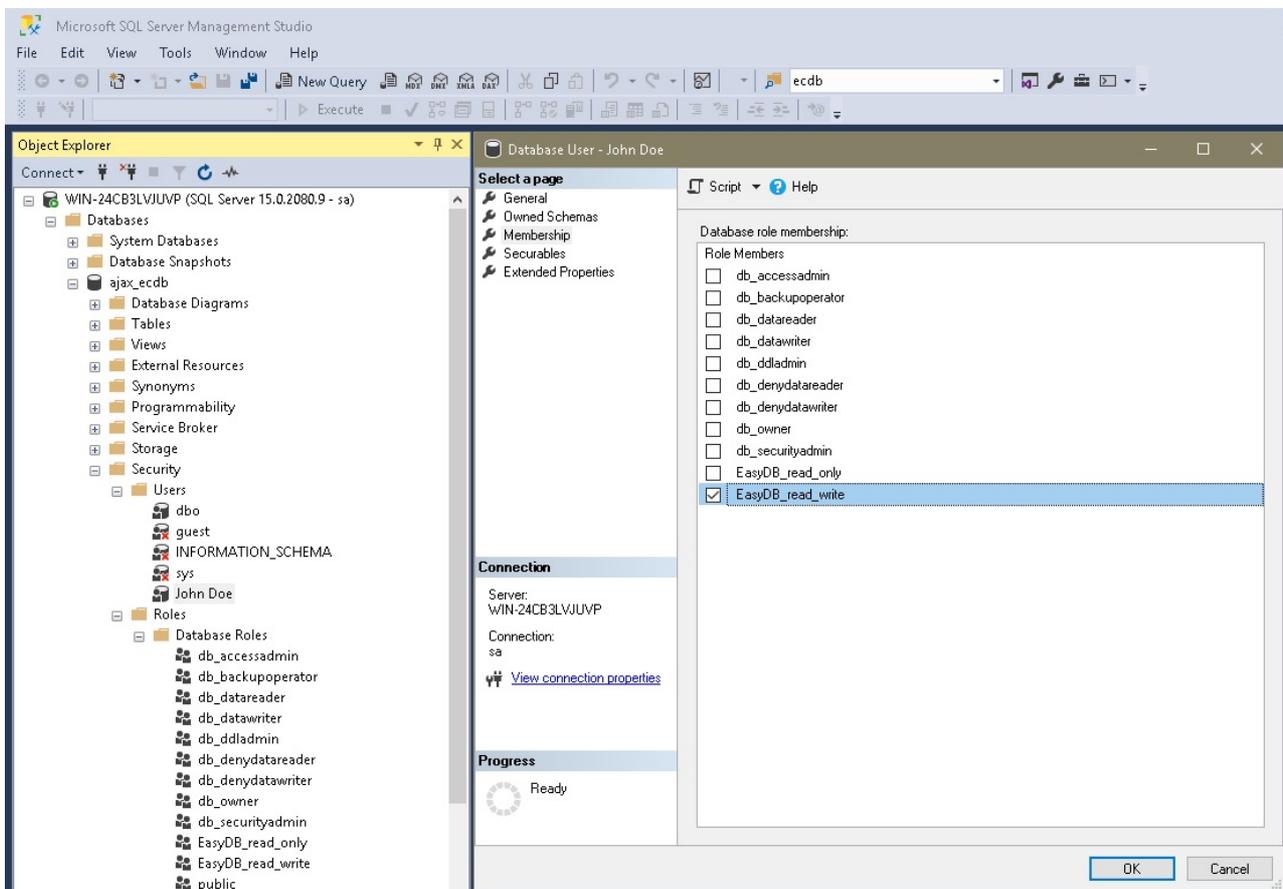
Use ALTER RESOURCE POOL to change the memory percentage values on an existing resource pool if needed.

Please consult online Microsoft documentation for best practices in determining the needed resource size.

## Access to the EasyCore Database - EasyDB

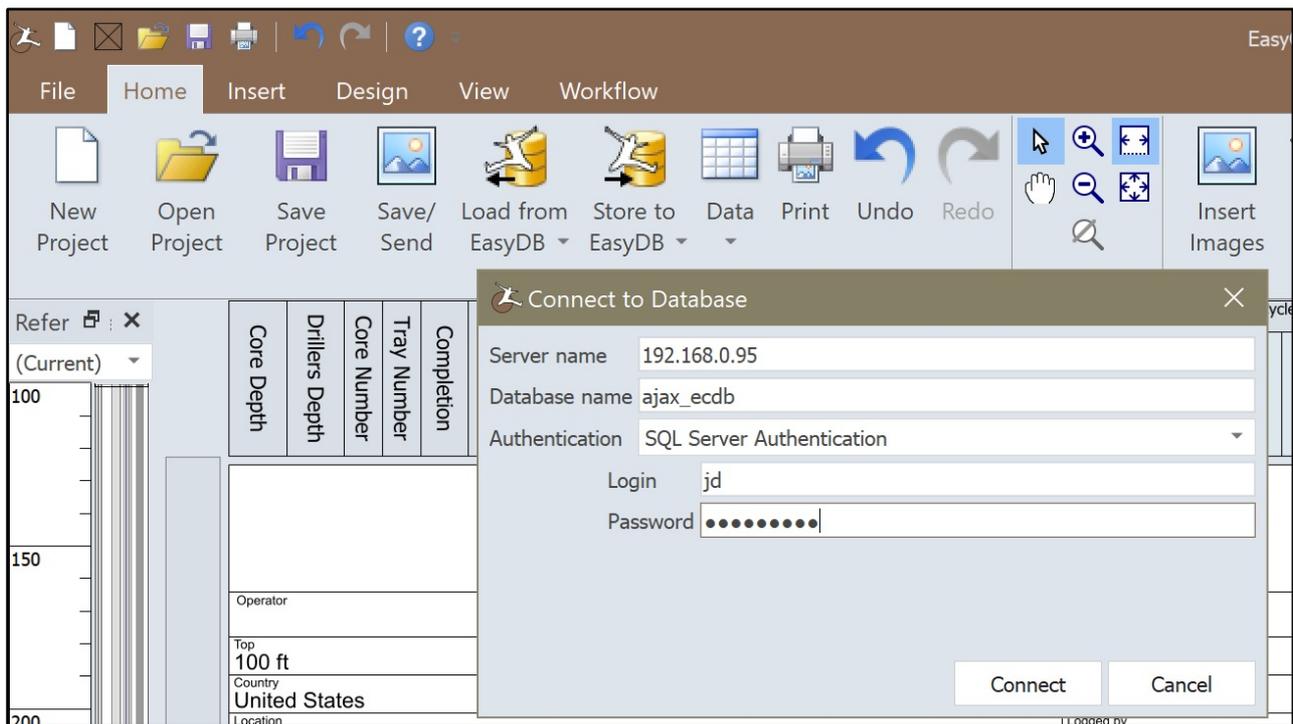
The default setup allows any user access to all data in EasyDB, as long as they have SQL permissions to Select, Insert, Update, and Delete, which can be set per user in SQL Server Management Studio.

EasyDB comes with some predefined roles to make it easier to set up new users. Simply add a new user with membership to EasyDB\_read\_write to allow access for both reading from and writing to EasyDB :



## Accessing EasyDB from EasyCore

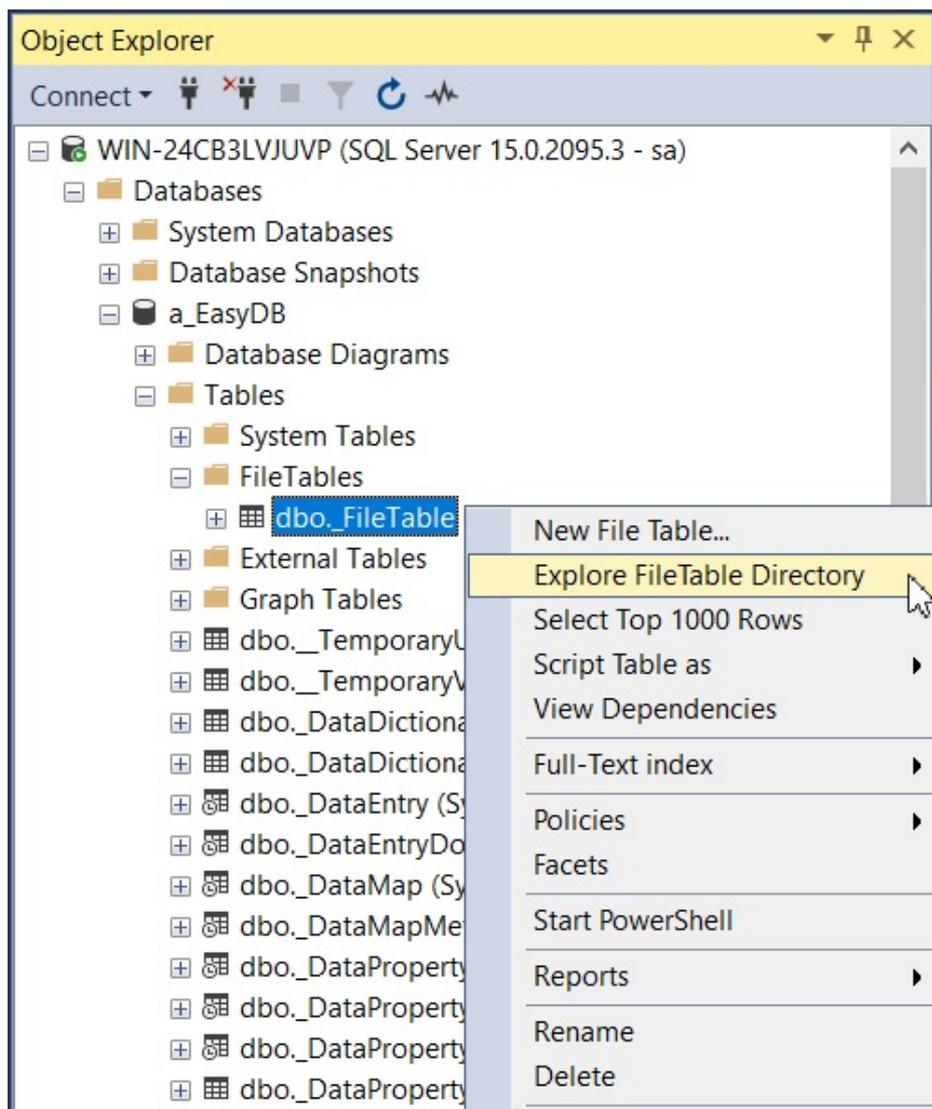
When using the database to Load and Store data, you will on the first access in an EasyCore session be asked for credentials. You can connect using either SQL Server Authentication or Windows Authentication.



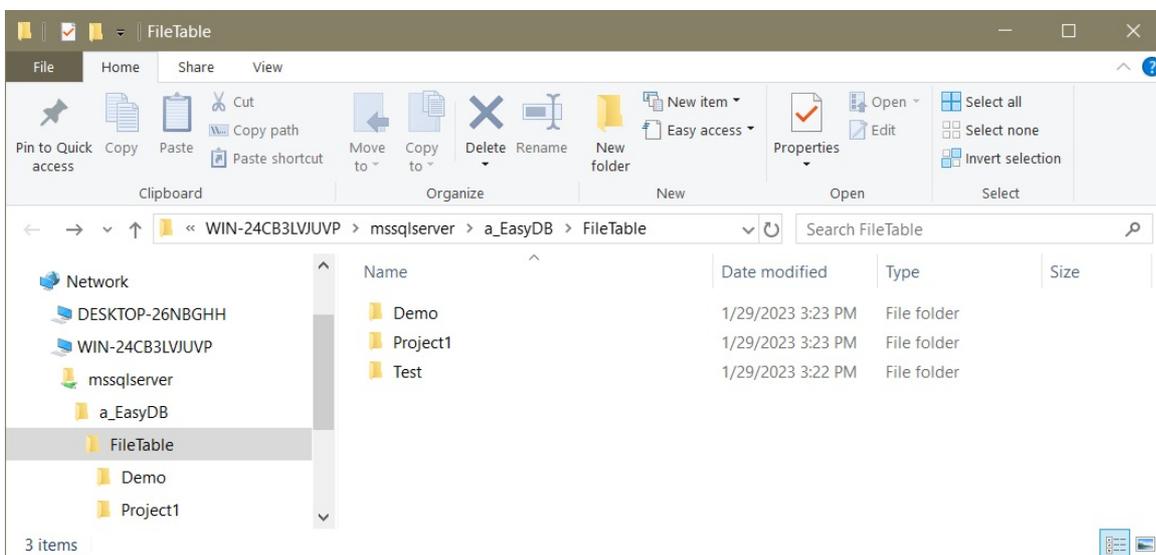
## Accessing EasyDB FileTable from File Explorer

The files uploaded to EasyDB are stored in the so-called FileTable. These files can be accessed as ordinary files in the Windows file system, using File Explorer.

To locate the FileTable folder, open SQL Server Management Studio, and right click the `dbo_FileTable` in an instance of EasyDB.



Clicking "Explore FileTable Directory", will open File Explorer in the folder containing the files in EasyDB.



The network path is made up of the server name (WIN-24CB3LVJUV in this example), the name of your SQL Server installation (mssqlserver by default), and the name of your EasyDB instance (a\_EasyDB in example).

Any user that can access EasyDB using Windows Authentication, can also browse the files in this location, unless it is specifically disabled on the SQL Server.

## The EasyCore Database - EasyDB - table structure

EasyDB is a relational database using generic tables to be able to store any kind of geological data that can be described in EasyCore.

There are a number of central tables to store data in a generic form:

`_DataPropertyString`: stores all kind of text strings

`_DataPropertyInt`: stores all integer values

`_DataPropertyDouble`: stores decimal numbers at "double" precision

The data properties are connected to the projects using a few tables:

`_DataEntry` : contains top and bottom depths and connects properties to the data maps

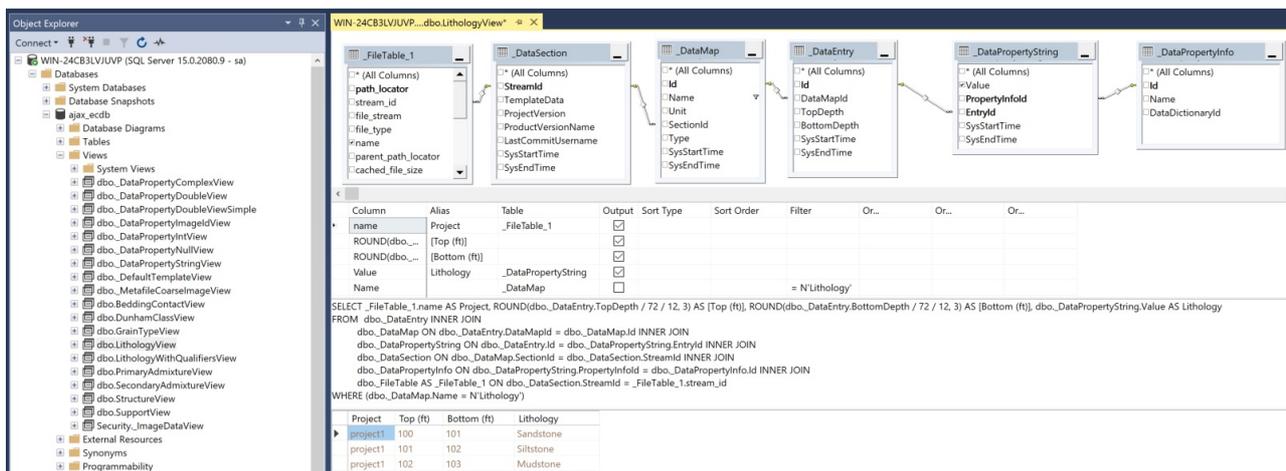
`_DataMap` : stores data map names and types and connects them to the data sections

`_DataSection` : connects the data to the file table structure

`_FileTable` : contains the project names and the tree structure of project and image folders

EasyDB comes with a number of views that can be used to quickly get an overview of the data tables.

A very basic view is LithologyView, which shows all Lithology text strings in the database:



Besides these central tables, EasyDB contains a number of other tables to hold image data, metafiles, and more.

The database has been optimized for fast loading of image data, and the EasyCore interface makes it possible to store images in the database, independent of project files, for later usage.

All trademarks are the property of their respective owners.