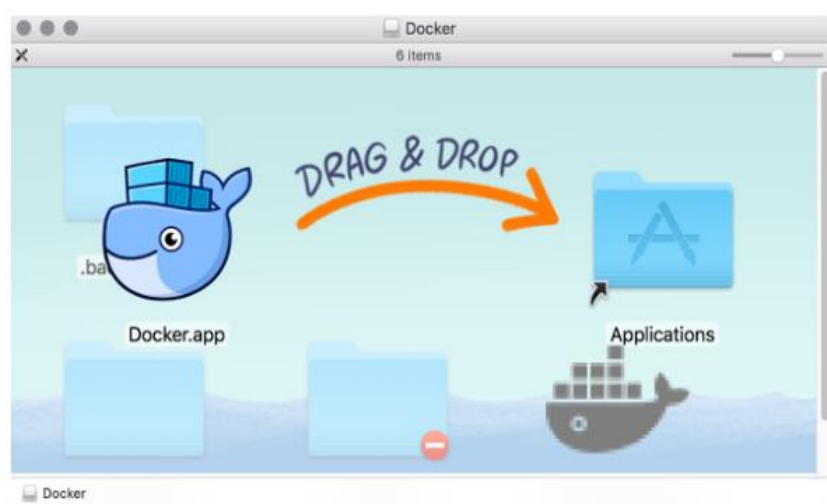# SQL Server Installation for Mac
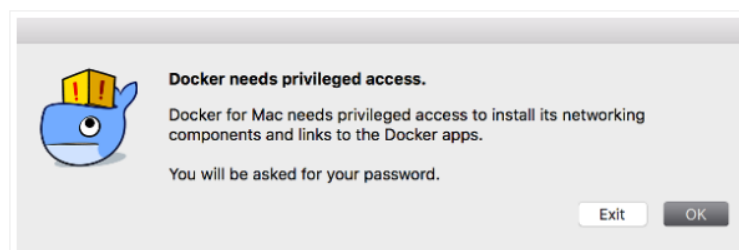
Step 1: Install Docker

Download the (free) Docker Community Edition for Mac (unless you've already got it installed on your system). This will enable you to run SQL Server from within a Docker container.

- To download, visit the Docker CE for Mac download page and click Get Docker.
- To install, double-click on the .dmg file and then drag the Docker.app icon to your Application folder.

Step 2: Launch Docker

- Launch Docker the same way you'd launch any other application (eg, via the Applications folder, the Launchpad, etc).
- When you open Docker, you might be prompted for your password so that Docker can install its networking components and links to the Docker apps. Go ahead and provide your password, as Docker needs this to run.
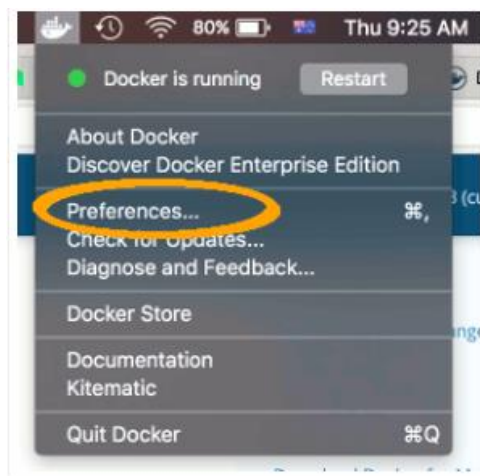

The password request dialog
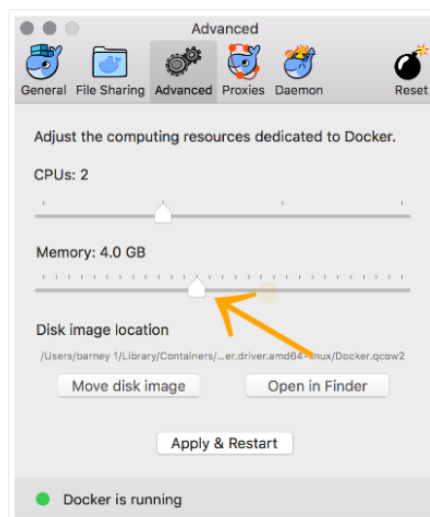
Step 3: Increase the Memory

By default, Docker will have 2GB of memory allocated to it. SQL Server needs at least 3.25GB. To be safe, increase it to 4GB if you can.

To do this:

    a.   Select Preferences from the little Docker icon in the top menu

    b.   Slide the memory slider up to at least 4GB

    c.   Click Apply & Restart

Selecting the preferences.

Increasing the memory.

Step 4: Download SQL Server

Open a Terminal window and run the following command.

```
docker pull microsoft/mssql-server-linux
```

This downloads the latest SQL Server for Linux Docker image to your computer.

Step 5: Launch the Docker Image

Run the following command to launch an instance of the Docker image you just downloaded:

```
docker run -d --name sql_server_demo -e 'ACCEPT_EULA=Y' -e
'SA_PASSWORD=reallyStrongPwd123' -p 1433:1433 microsoft/mssql-server-linux
```

Note: use your own name and password.

Explanation of the parameters:

-d: launches the Docker container in daemon mode

--name yourowncontainername: This parameter allows you to name the container.

-e 'ACCEPT_EULA=Y': The Y shows that you agree with the EULA (End User Licence Agreement). This is required in order to have SQL Server for Linux run on your Mac.

-e 'SA_PASSWORD= Yourownpassword': Required parameter that sets the sa database password.

-p 1433:1433: This maps the local port 1433 to port 1433 on the container. This is the default TCP port that SQL Server uses to listen for connections.

microsoft/mssql-server-linux: This tells Docker which image to use.

Password Strength

If you get the following error at this step, try again, but with a stronger password.

Microsoft(R) SQL Server(R) setup failed with error code 1. Please check the setup log in /var/opt/mssql/log for more information.

Step 6: Check the Docker Container (optional)

Type the following command to check that the Docker container is running.

```
docker ps
```

If it's up and running, it should return something like this:

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
PORTS	NAMES			
4e4aa21eb391	microsoft/mssql-server-linux	"/bin/sh -c /opt/m..."	23 seconds ago	Up
21 seconds	0.0.0.0:1433->1433/tcp	sql_server_demo		

Install SQL Server GUI for your Mac

Download and install Azure Data Studio

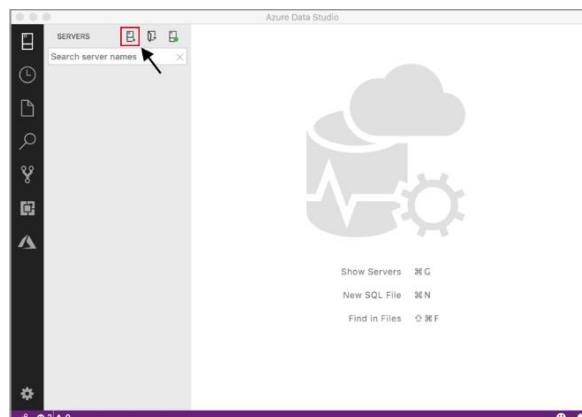Azure Data Studio runs on Windows, macOS, and Linux.

Get Azure Data Studio for macOS

1. Visit the Azure Data Studio download page, and click the .zip file for macOS

2. Once the .zip file has finished downloading, double click it to expand its contents

3. To make Azure Data Studio available in the Launchpad, drag Azure Data Studio.app to the Applications folder.
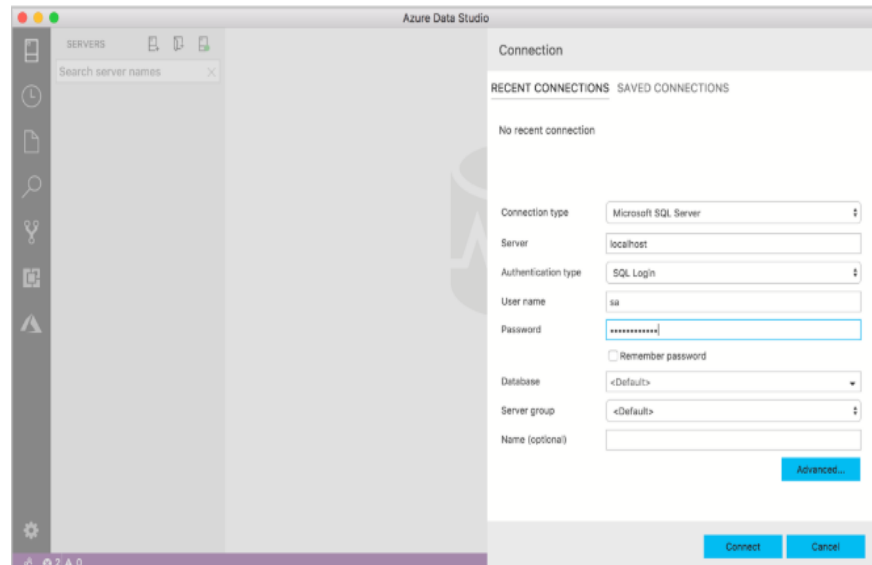
Connect to SQL Server

1. Start **Azure Data Studio**
2. The first time you run *Azure Data Studio* the **Connection** dialog opens. If the **Connection** dialog doesn't open, click the **New Connection** icon in the **SERVERS** page:

3. Fill in the fields as follows
   - **Server Name:** localhost
   - **Authentication Type:** SQL Login
   - **User name:** User name for the SQL Server
   - **Password:** Password for the SQL Server
   - **Database Name:** leave this field blank
   - **Server Group:** <Default>

4. Click **Connect** button

Error when Connecting?

- If you receive an error when trying to connect, check that SQL Server is in fact running.
- Check your Mac has Docker running and you've started the SQL Server Docker container.

Below are instructions for launching Docker and starting the Docker container.

Open Docker and Start the Docker Container

1. Open Docker just as you would open any other application (e.g. via the Launchpad, Applications folder, etc).
2. Once Docker is running, open your Terminal and start the Docker container. It should look something like this:

```
docker start sql_server_demo
```

Note: This starts a previously stopped container called sql_server_demo. This is the name that I gave the container in my SQL Server on a Mac . You'll need to modify this command to suit your own container's name.