

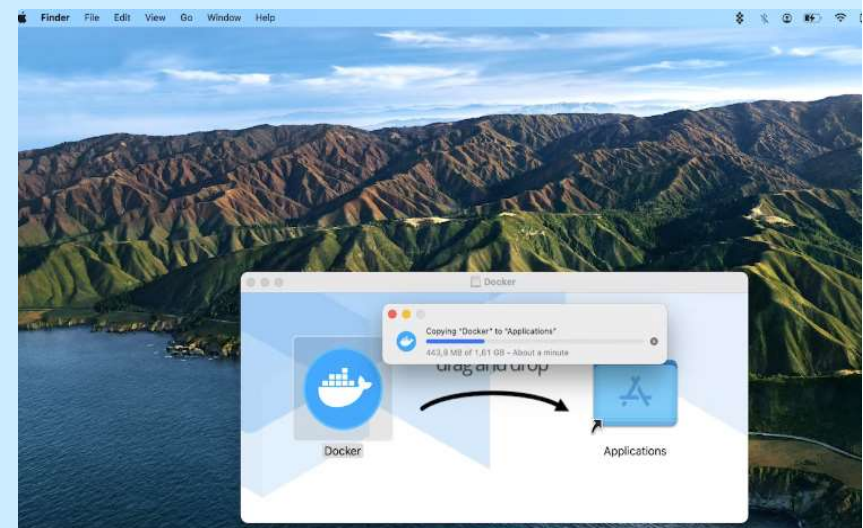
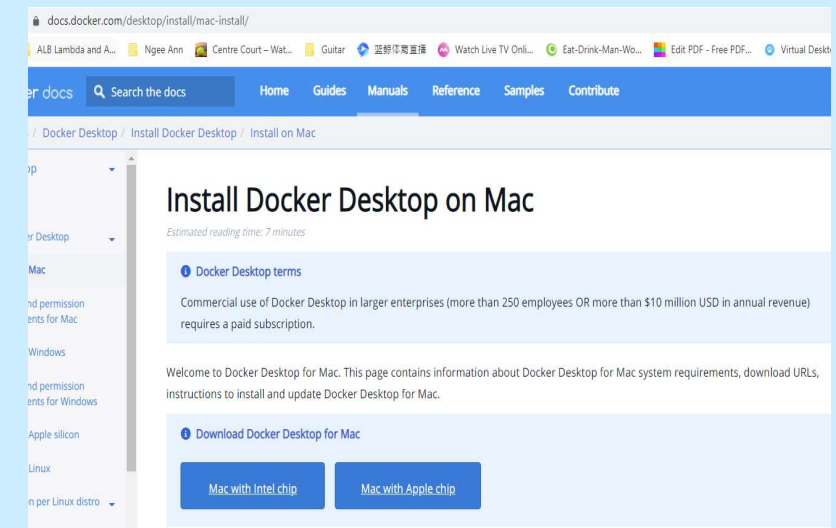
MSSQL Server Installation on Mac OS

Databases

Day 1

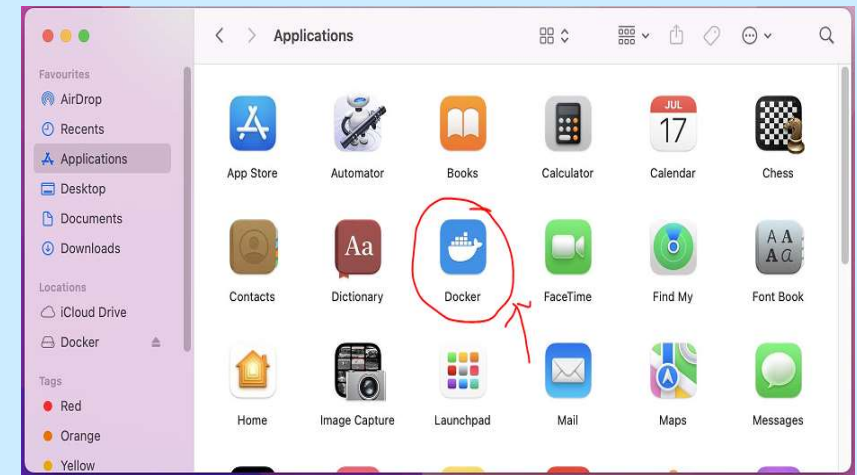
Step 1 – Install n Configure Dockers

- Microsoft developed SQL Server for Windows. To run it on Mac, need Docker software tool for the task as it provides an environment for SQL Server to work in.
- Go to **Docker website** (do search - install dockers mac) and download the app for your Mac. Make sure to check which chip to use to download. Allow downloads when prompted.
- Find and open **Docker.dmg** in your **Downloads**.
- Double-click the .dmg file to start the installation process. Once done, **drag** the Docker.app icon to Applications folder.



Step 1 – Install n Configure Dockers

- Find Docker in **Finder > Applications** and open it.
- The app will need to install a helper, so your Mac will ask to confirm the action with your password.
- Docker Desktop needs privileged access. Click OK and enter password when prompted.



Step 2 – Install MSSQL Server

- ▶ Follow these steps to set up SQL Server as a Docker container:
- ▶ **Download the SQL Server Image**
- ▶ Start by opening **Terminal** in **Finder > Applications > Utilities** or through a Spotlight search.
- ▶ In Terminal window, type in the following command to download the image for SQL server 2019 and hit Enter:
- ▶ **`sudo docker pull mcr.microsoft.com/mssql/server:2019-latest`**



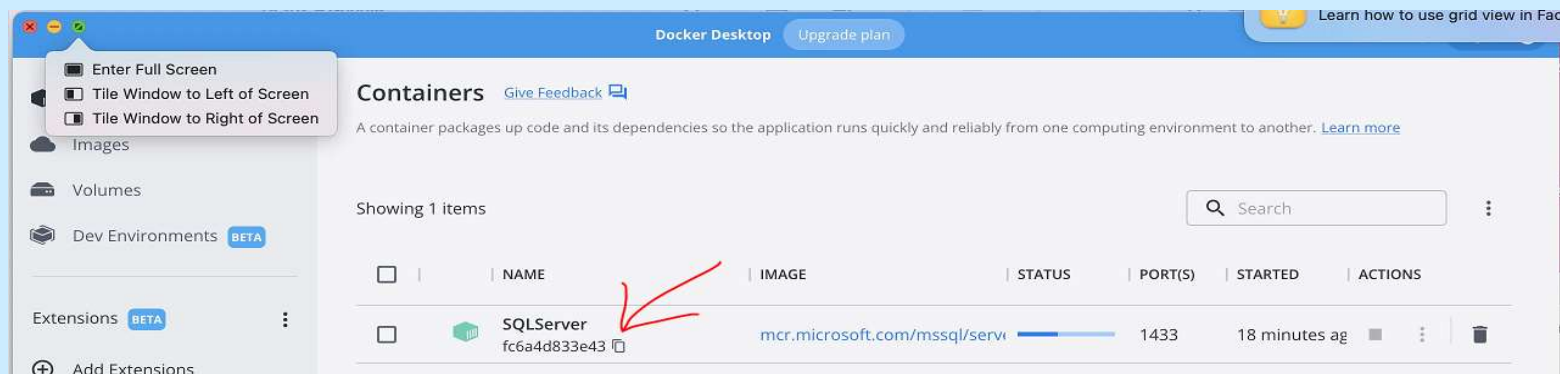
Step 3 – Launch MSSQL Image

- ▶ **Launch SQL Server Image in Docker:**
- ▶ with the following command in Terminal:
- ▶ *sudo docker run --name SQLServer -e 'ACCEPT_EULA=Y' -e 'SA_PASSWORD=Password-123' -p 1433:1433 mcr.microsoft.com/mssql/server:2019-latest*
- ▶ **Note**
 - ▶ ACCEPT_EULA=Y means you are accepting end user license agreement for Docker.
 - ▶ Password needs to be at least 8 characters long, include uppercase n lowercase letters, numbers, and symbols.
- ▶ **SQL Server should be running – check Dockers.**

```

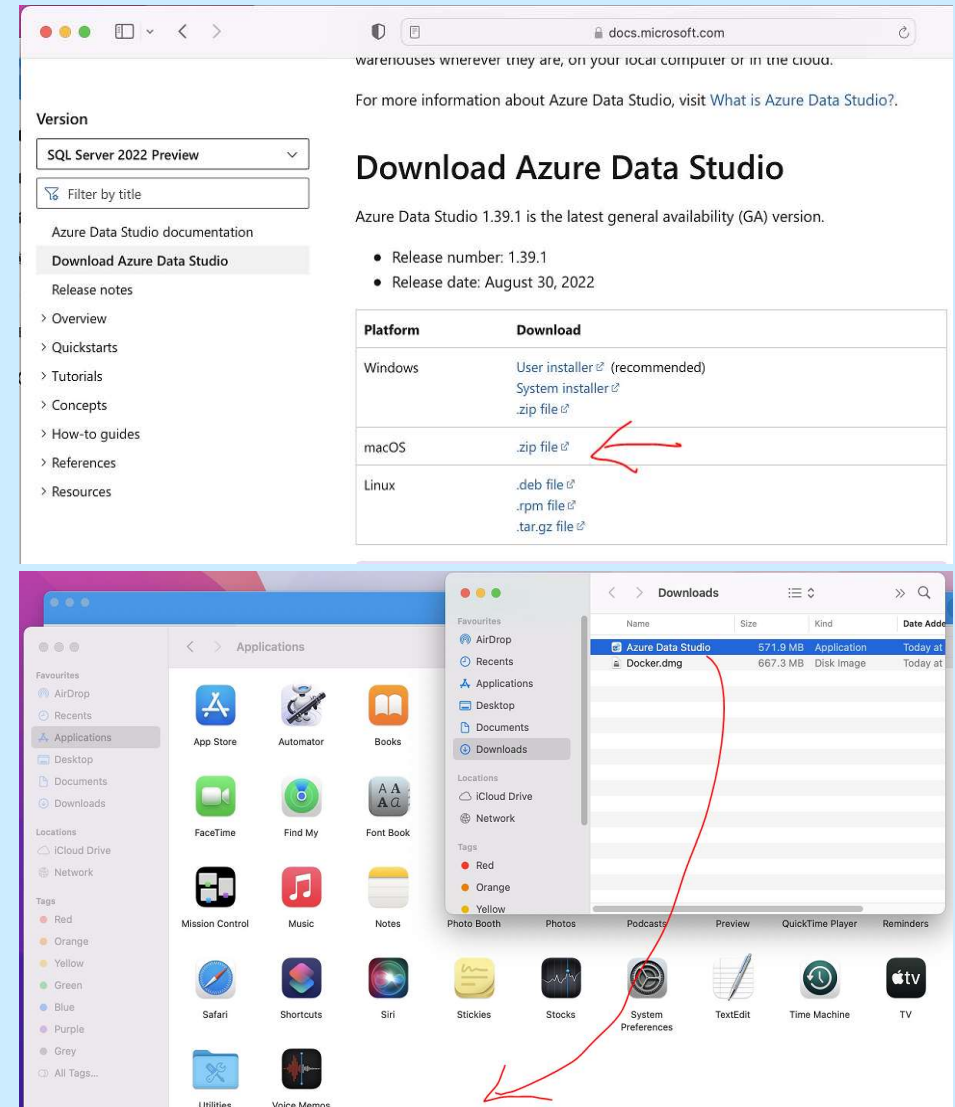
user@Admins-MBP ~ % sudo docker run --name SQLServer -e 'ACCEPT_EULA=Y' -e 'SA_PASSWORD=Password-123' -p 1433:1433 mcr.microsoft.com/mssql/server:2019-latest
Password:
SQL Server 2019 will run as non-root by default.
This container is running as user mssql.
To learn more visit https://go.microsoft.com/fwlink/?linkid=2099216.
2022-09-16 03:11:50.46 Server Setup step is copying system data file 'C:\templatedata\master.mdf' to '/var/opt/mssql/data/master.mdf'.
2022-09-16 03:11:50.52 Server Did not find an existing master data file /var/opt/mssql/data/master.mdf, copying the missing default master and other system d
atabase files. If you have moved the database location, but not moved the database files, startup may fail. To repair: shutdown SQL Server, move the master databa
se to configured location, and restart.
2022-09-16 03:11:50.52 Server Setup step is copying system data file 'C:\templatedata\mastlog.ldf' to '/var/opt/mssql/data/mastlog.ldf'.
2022-09-16 03:11:50.53 Server Setup step is copying system data file 'C:\templatedata\model.mdf' to '/var/opt/mssql/data/model.mdf'.
2022-09-16 03:11:50.54 Server Setup step is copying system data file 'C:\templatedata\modellog.ldf' to '/var/opt/mssql/data/modellog.ldf'.
2022-09-16 03:11:50.56 Server Setup step is copying system data file 'C:\templatedata\msdbdata.mdf' to '/var/opt/mssql/data/msdbdata.mdf'.
2022-09-16 03:11:50.58 Server Setup step is copying system data file 'C:\templatedata\msdblog.ldf' to '/var/opt/mssql/data/msdblog.ldf'.
2022-09-16 03:11:50.59 Server Setup step is FORCE copying system data file 'C:\templatedata\model_replicatedmaster.mdf' to '/var/opt/mssql/data/model_replica

```



Step 4–Install Azure Data Studio

- ▶ **Azure Data Studio is a lightweight management tool for managing SQL Server. Is free n available for macOS, Linux, and Windows. Mac equivalent for SQL Server Management Studio (SSMS).**
- ▶ **Go to Azure Data Studio download page and click the .zip file for macOS. (google “azure data studio”).Find the version of the tool for macOS and download.**
- ▶ **Install Azure Data Studio.**
- ▶ **Once the .zip file has downloaded, drag and drop the Azure Data Studio icon from your Downloads folder to Applications in Finder.**
- ▶ **Launch Azure Data Studio**
- ▶ **Launch Azure Data Studio (by clicking on its icon in your Launchpad or the Applications folder).**

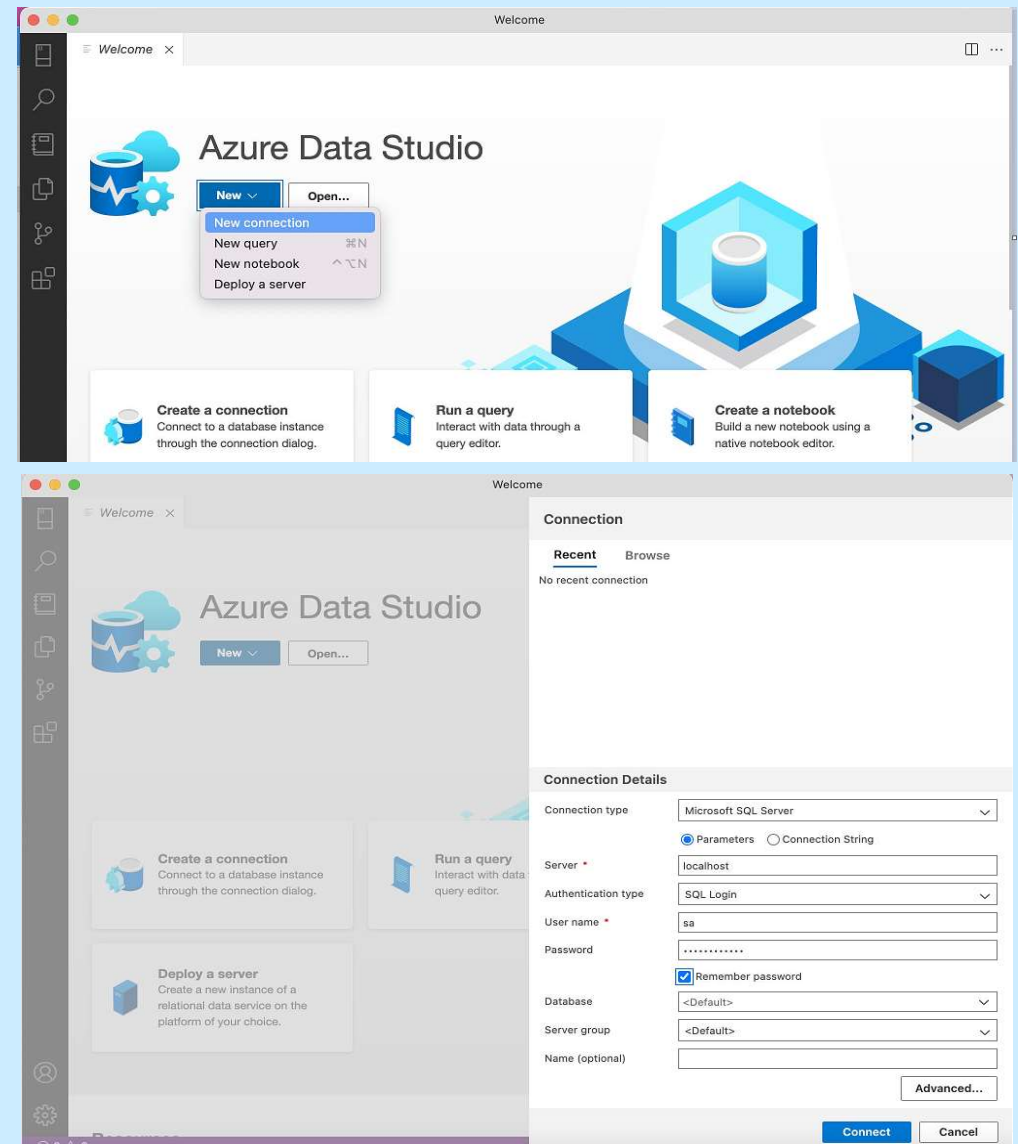


Step 4 – Check if SQL Server Working

- ▶ Open the app and click New connection.

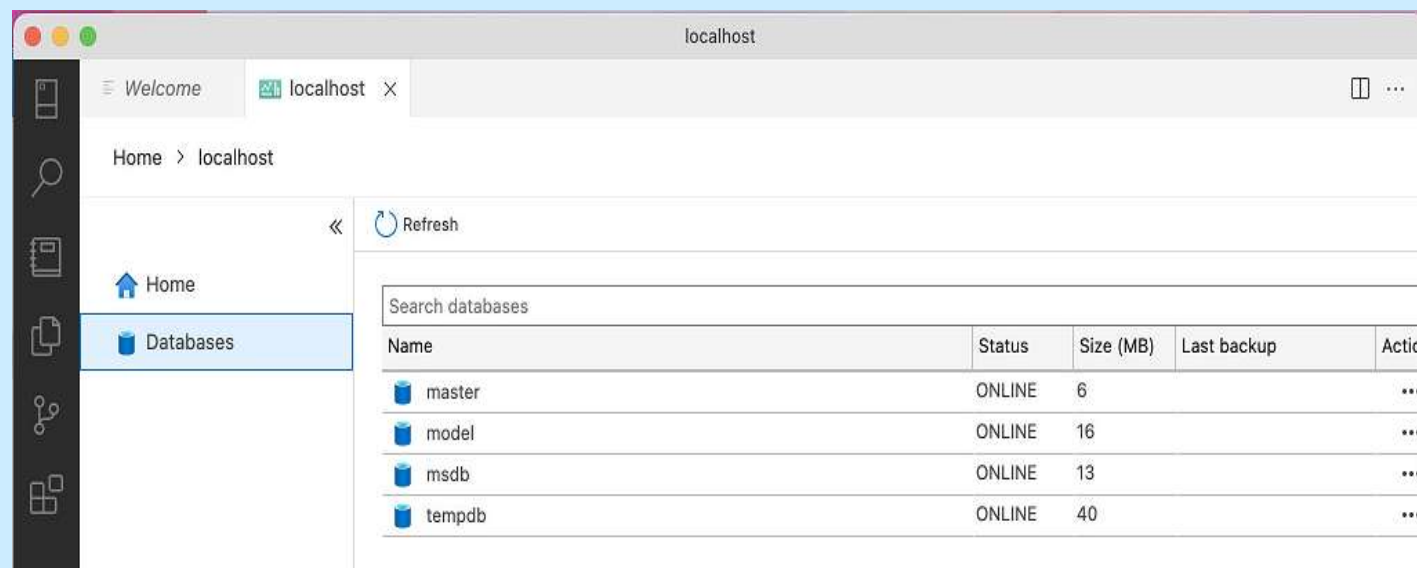
Connect to SQL Server

- ▶ Enter the SQL Server connection details.
- **Server Name:** localhost
- **Authentication Type:** SQL Login
- **User name:** sa
- **Password:** Password-123
- **Database Name:** <default>
- **Server Group:** <default>
- ▶ You should be now connected to SQL Server with Azure Data Studio. Once logged in, the Server Dashboard is displayed:



Step 4 – Check if SQL Server Working

- ▶ You've now connected to SQL Server with Azure Data Studio. Once logged in, the Server Dashboard is displayed:
- ▶ Click on Databases, you should see master, model, msdb and tempdb databases



Step 5 – Create Database - Run Setup Script

- ▶ Create the NP40Book database on local MS SQL server by loading and executing the database script file – NP40Book_Setup.sql.
- ▶ Download the NP40Book_Setup.sql file to Mac.
- ▶ On Azure Data Studio double click on master database.
- ▶ Click on New Query.

Name	Type	Date modified	Size
Installation Guide - MS SQLServer 2019 Express - need change.pdf	Microsoft Edge ...	11/10/2021 10:01 ...	959 KB
MSSQL Server Installation (Mac).pptx	Microsoft Powe...	16/9/2022 1:12 pm	4,084 KB
NP40Book_Setup.sql	Microsoft SQL ...	11/10/2021 10:01 ...	17 KB
SQL2019-SSEI-Expr.exe	Application	11/10/2021 10:01 ...	6,227 KB

Name	Status	Size (MB)	Last backup	Actio.
master	ONLINE	6		...
model	ONLINE	16		...
msdb	ONLINE	13		...
tempdb	ONLINE	40		...

Name	Schema	Type	Actio.
Search by name of type (t:, v:, f:, or sp:)			

Step 5 – Create Database - Run Setup Script

- ▶ **Copy** the content of the NP40Book_Setup.sql file and **paste** it to the query.
- ▶ Click **Run** to execute the query to create the database.
- ▶ Check that under Databases a new database called NP40Book is created.

```

1  /* DB Book */
2  /* DatabaseSetup.sql */
3  /* Creation Date: 12/6/2003 */
4  /* Last Updated Date: 16 Sep 2021 */
5
6  /** Delete database if it exists */
7  USE master
8  IF EXISTS(select * from sys.databases where name='NP40Book')
9  DROP DATABASE NP40Book
10 GO
11
12 Create Database NP40Book
13 GO
14
15 use NP40Book
16 GO
17
18 /** Delete tables (if they exist) before creating */
19
20 /* Table: dbo.Loan */
21 if exists (select * from sysobjects
22 where id = object_id('dbo.Loan') and xtype = 'U')
  
```

Name	Status	Size (MB)	Last backup	Actio.
master	ONLINE	6		...
model	ONLINE	16		...
msdb	ONLINE	13		...
tempdb	ONLINE	40		...
NP40Book	ONLINE	16		...