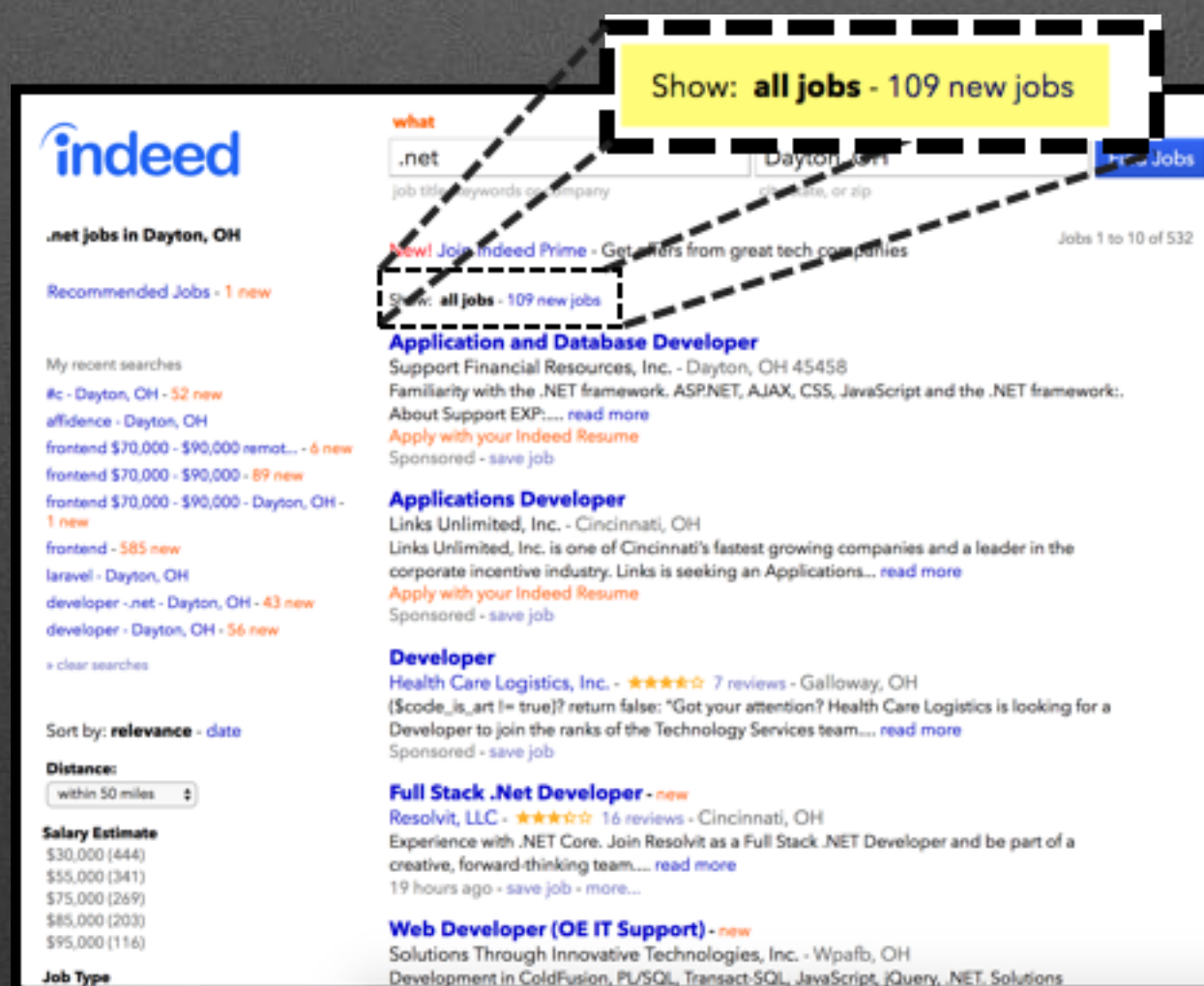


Setting up Local Development for #C and Microsoft SQL on Mac

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Why .Net?

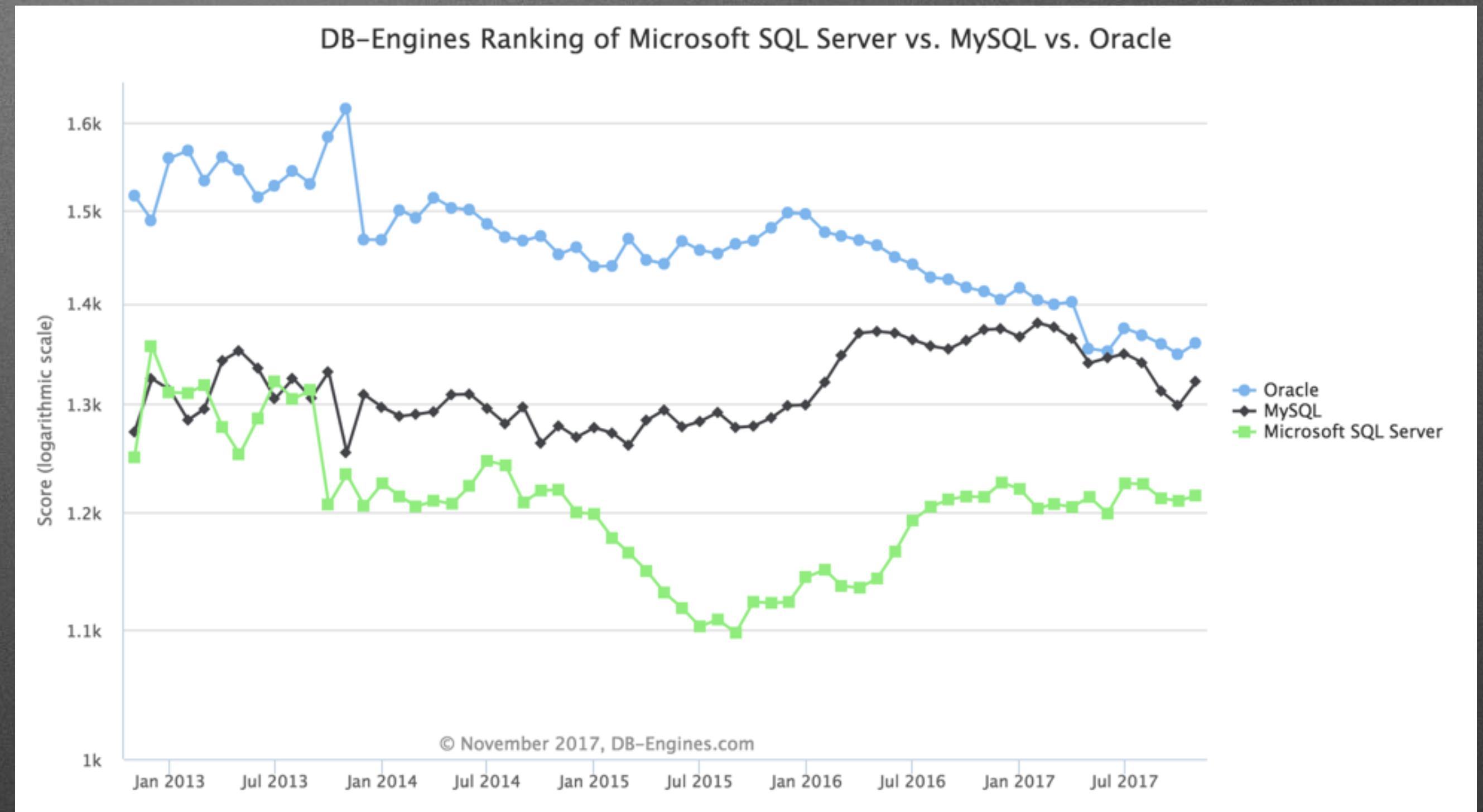
- It's been part of enterprise projects for decades
- Microsoft is listening and responding
- New tools, like Visual Studio Code, lower the barrier of entry
- There is immediate need by employers:



Why Microsoft SQL?



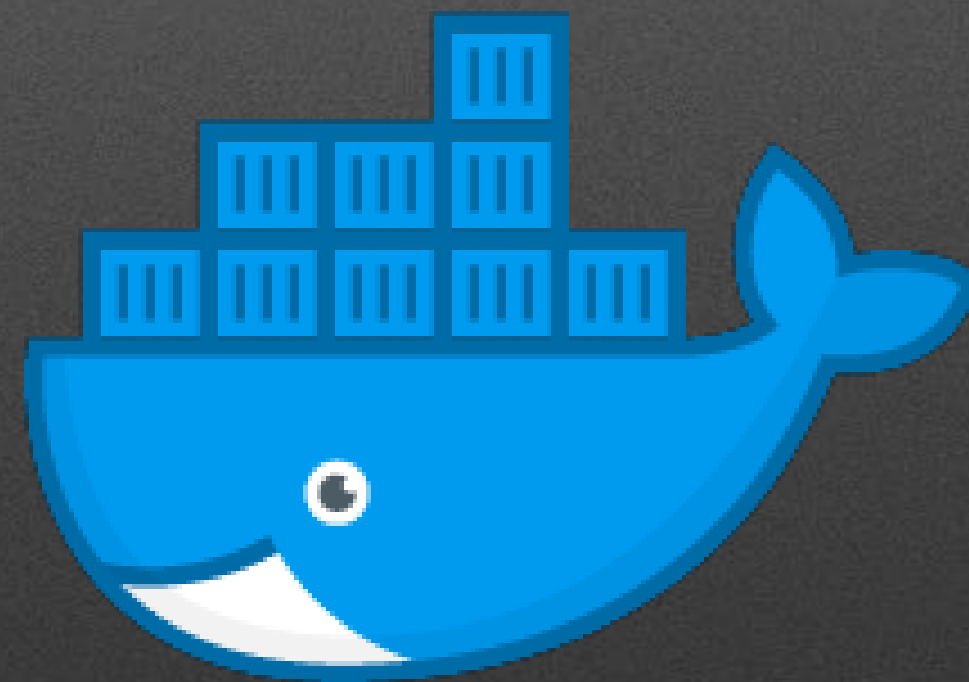
- SSIS - Integrations Service
- SSRS - Reporting Service
- SSAS - Analysis Service
- It's had a steady return



Source: DB-Engines.com

What were going to do:

Were going to run a Linux version of SQL Server in a Docker container so our local .Net app can use SQL Server



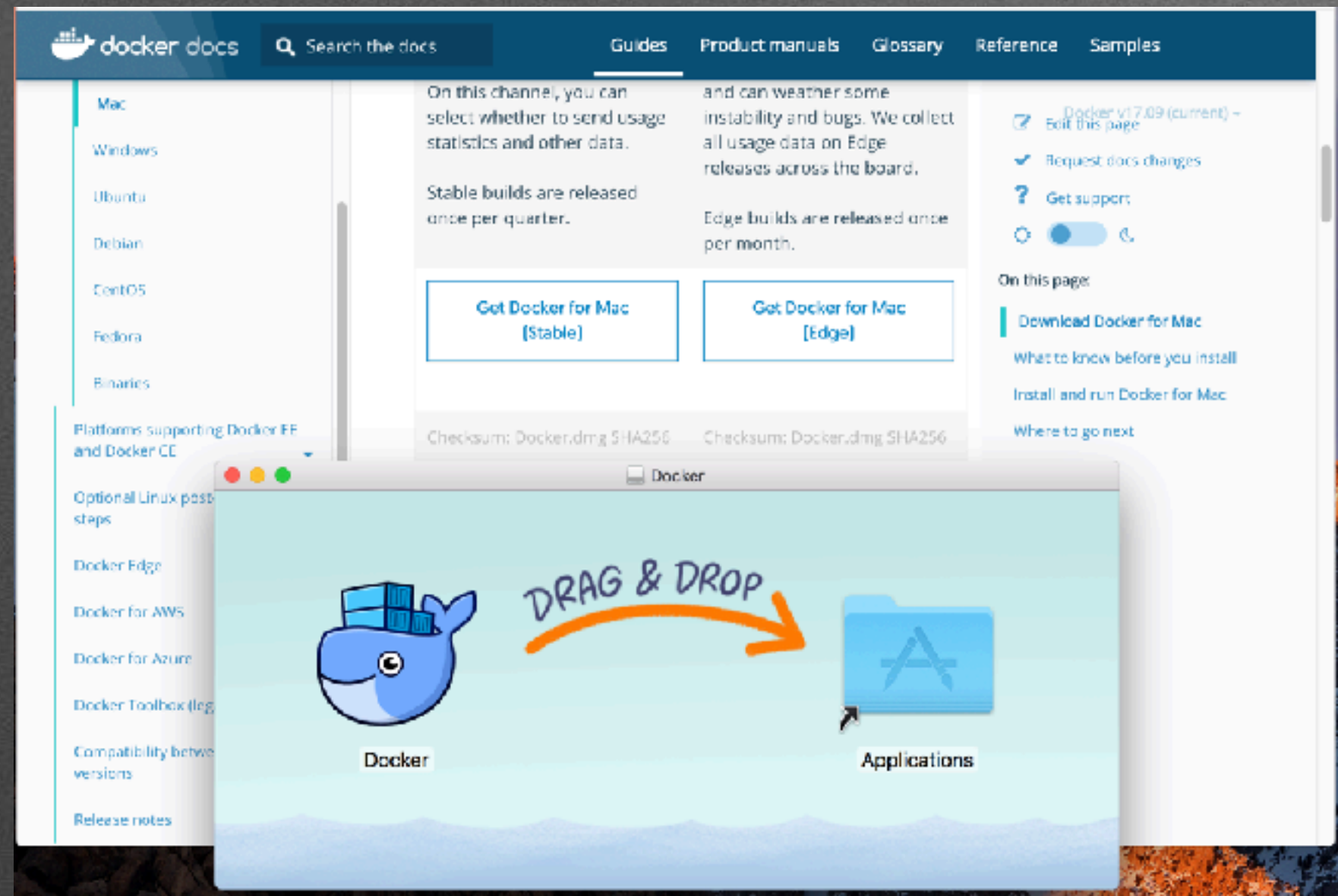
docker

Start Building

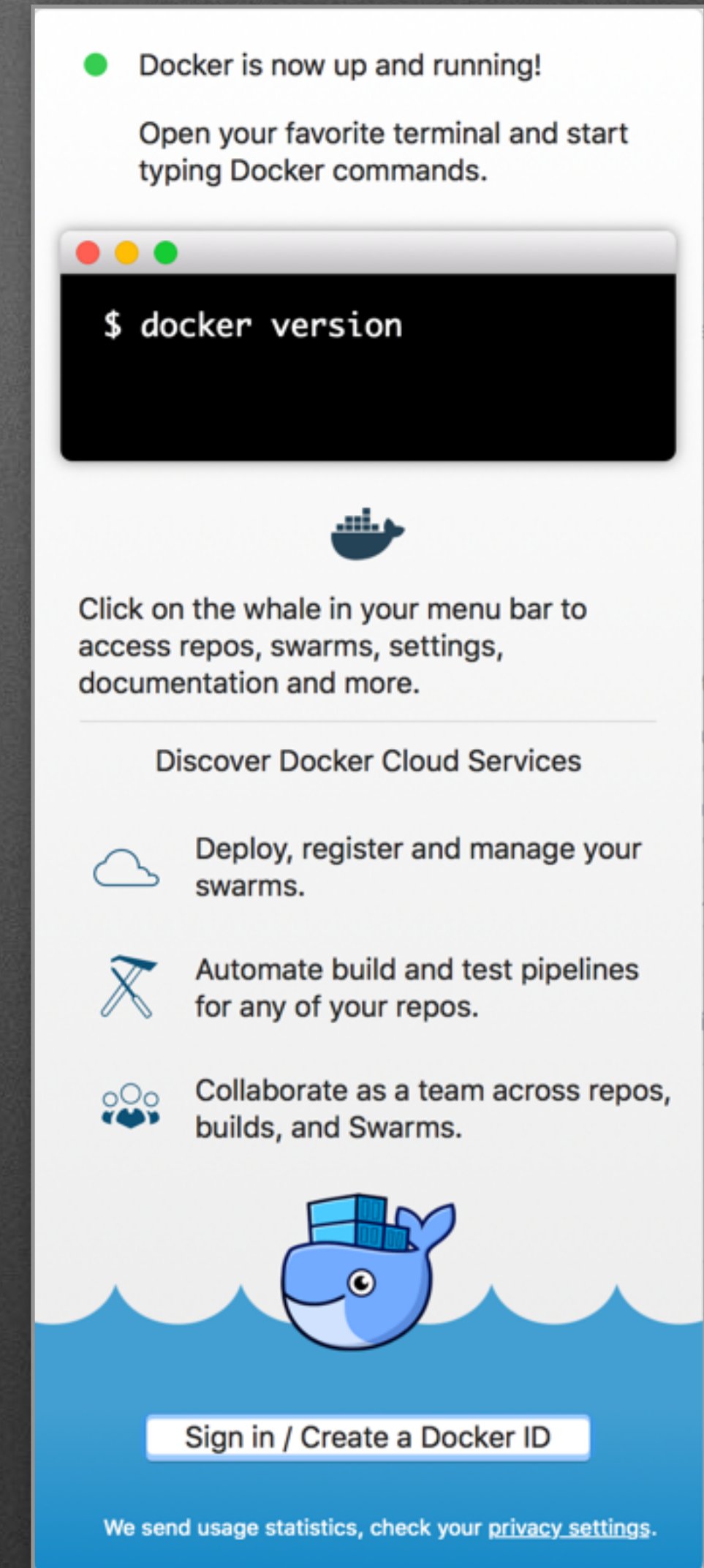
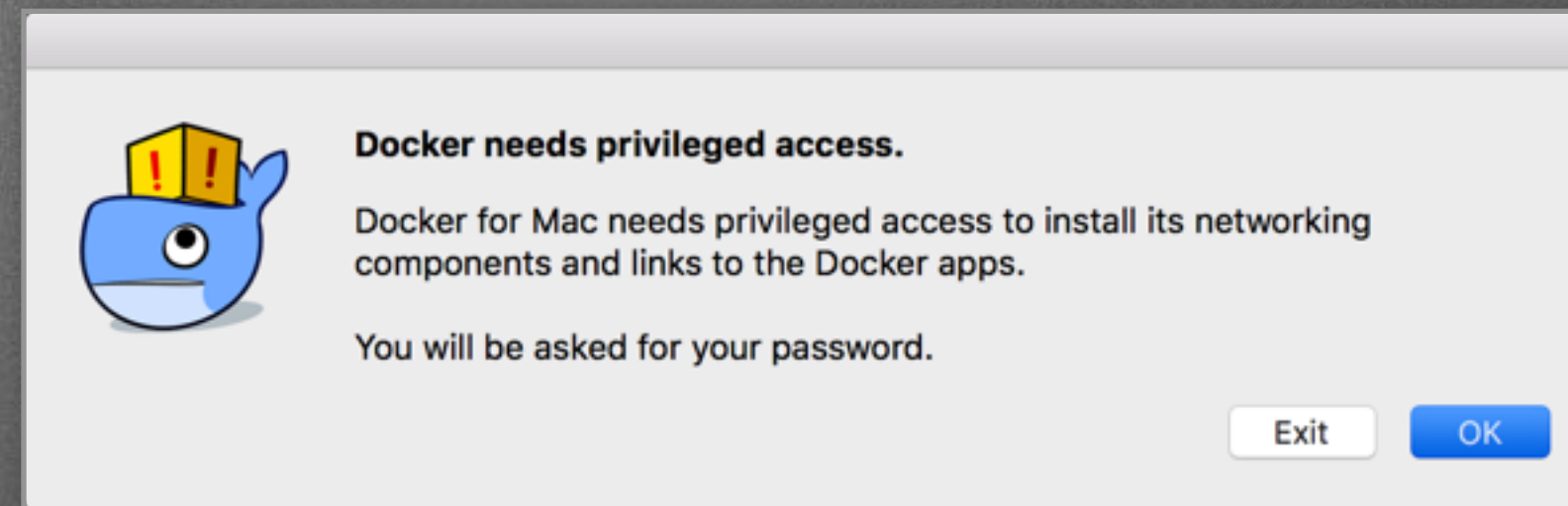
Create C# apps using SQL Server on macOS

- Get started with Docker for Mac << Info
 1. Install Docker for Mac << Download

Install Docker



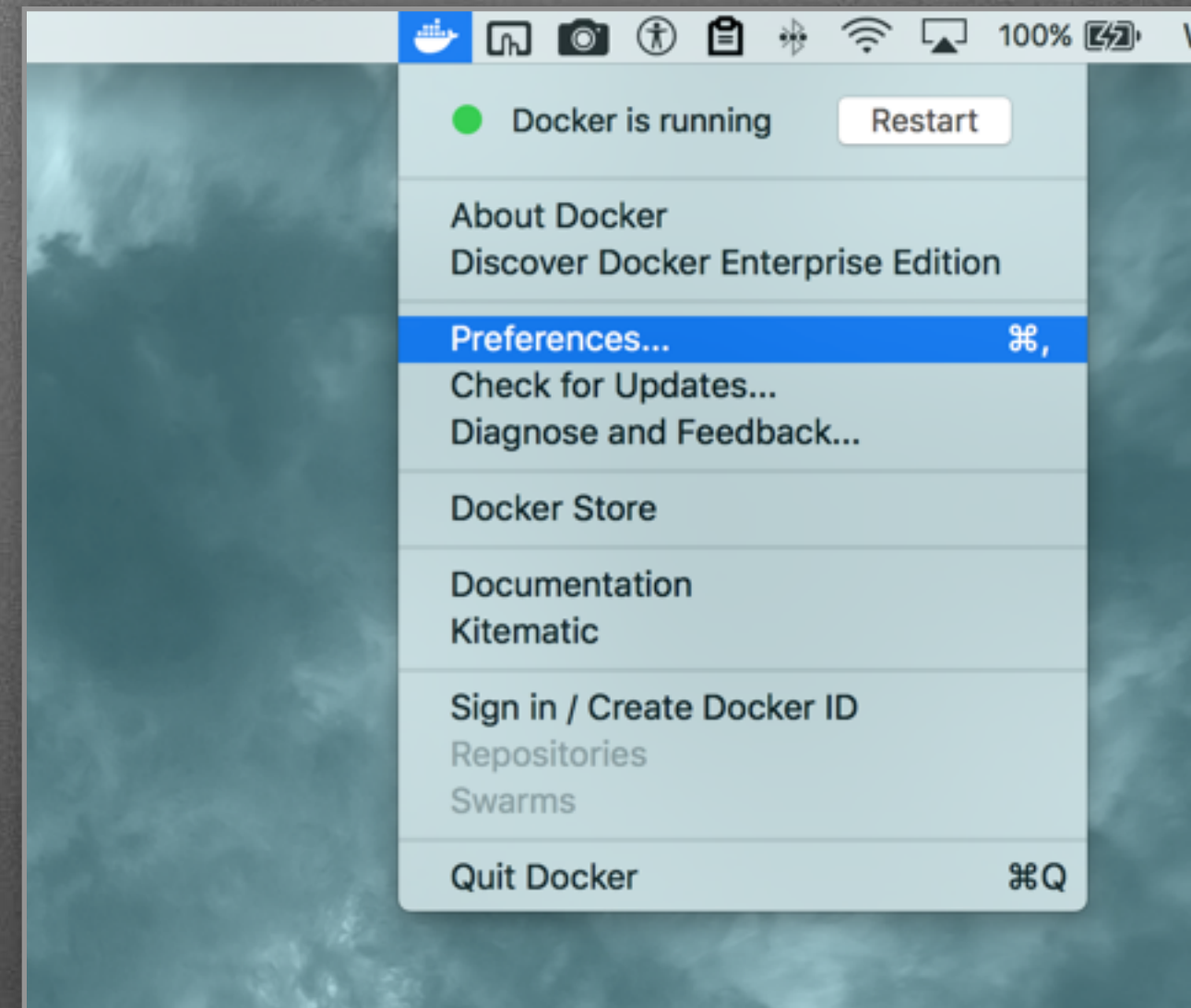
<https://docs.docker.com/docker-for-mac/install/>



Provisioning Docker

We need to give SQL Server enough resources to run.

The minimum recommendation is 4GB of RAM and 2CPUs



Get and Run the Docker Container

```
> sudo docker pull microsoft/mssql-server-linux:2017-latest
```

```
> docker run -e 'ACCEPT_EULA=Y' -e  
'SA_PASSWORD=yourStrong(!)Password' -p 1433:1433 -d microsoft/  
mssql-server-linux
```


Install .Net Core

- Download and install the package from Microsoft
<https://goo.gl/wtWQvF>
- Open a new terminal, go to a project folder and run

```
>dotnet new console -o SqlServerSample
```

```
→ Development mkdir MSSQLOnMac  
→ Development cd MSSQLOnMac  
→ MSSQLOnMac dotnet new console -o SqlServerSample  
The template "Console Application" was created successfully.  
  
Processing post-creation actions...  
Running 'dotnet restore' on SqlServerSample/SqlServerSample.csproj...  
  Restoring packages for /Users/allen/Development/MSSQLOnMac/SqlServerSample/SqlServerSample.csproj...  
    Generating MSBuild file /Users/allen/Development/MSSQLOnMac/SqlServerSample/obj/SqlServerSample.csproj.nuget.g.props.  
    Generating MSBuild file /Users/allen/Development/MSSQLOnMac/SqlServerSample/obj/SqlServerSample.csproj.nuget.g.targets.  
  Restore completed in 197.22 ms for /Users/allen/Development/MSSQLOnMac/SqlServerSample/SqlServerSample.csproj.  
  
Restore succeeded.  
→ MSSQLOnMac
```


Demo

```
→ SqlServerSample pwd
/Users/allen/Development/MSSQLOnMac/SqlServerSample
→ SqlServerSample ls -la
total 16
drwxr-xr-x  5 allen  staff  170 Nov  1 13:41 .
drwxr-xr-x  3 allen  staff  102 Nov  1 13:41 ..
-rw-r--r--  1 allen  staff  197 Nov  1 13:41 Program.cs
-rw-r--r--  1 allen  staff  178 Nov  1 13:41 SqlServerSample.csproj
drwxr-xr-x  6 allen  staff  204 Nov  1 13:41 obj
→ SqlServerSample docker run -e 'ACCEPT_EULA=Y' -e 'SA_PASSWORD=yourStrong(!)Password' -p 1433:1433 -d microsoft/mssql-server-linux
→ SqlServerSample dotnet restore
Restore completed in 30.92 ms for /Users/allen/Development/MSSQLOnMac/SqlServerSample/SqlServerSample.csproj.
→ SqlServerSample dotnet run
Connecting to SQL Server ... Done.
All done. Press any key to finish...
```

```
drwxr-xr-x  6 allen  staff  204 Nov  1 13:41 obj
→ SqlServerSample docker run -e 'ACCEPT_EULA=Y' -e 'SA_PASSWORD=yourStrong(!)Password' -p 1433:1433 -d microsoft/mssql-server-linux
→ SqlServerSample dotnet restore
Restore completed in 30.92 ms for /Users/allen/Development/MSSQLOnMac/SqlServerSample/SqlServerSample.csproj.
→ SqlServerSample dotnet run
Connecting to SQL Server ... Done.
All done. Press any key to finish...
→ SqlServerSample dotnet run
Connect to SQL Server and demo Create, Read, Update and Delete operations.
Connecting to SQL Server ... Done.
Dropping and creating database 'SampleDB' ... Done.
Creating sample table with data, press any key to continue...Done.
Inserting a new row into table, press any key to continue...1 row(s) inserted
Updating 'Location' for user 'Nikita', press any key to continue...1 row(s) updated
Deleting user 'Jared', press any key to continue...1 row(s) deleted
Reading data from table, press any key to continue...
2 Nikita United States
3 Tom Germany
4 Jake United States
All done. Press any key to finish...
→ SqlServerSample
```


What Next?

- Look into Razor
Create a Razor Pages web app with ASP.NET Core and Visual Studio Code
- Look at MVC
Create an ASP.NET Core MVC app with Visual Studio Code

Conclusion

Microsoft has made it very easy to sharpening your skills with .Net and Microsoft SQL development.

By embracing Docker, creating MS SQL for Linux and Visual Studio Code they are demonstrating a change and embracing open source solutions.

There is a lot of call for help with .Net development. Maybe you could do some local development and soon be able to help shape the future of .Net.

Thank You

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