Dockerize and ASP.NET Core application

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Prerequisites

This example assumes you already have an ASP.NET Core app on your machine. If you are new to ASP.NET you can follow a [simple tutorial](https://www.asp.net/get-started) to initialize a project or clone our [ASP.NET Docker Sample](https://github.com/dotnet/dotnet-docker/tree/master/samples/aspnetapp).

Create a Dockerfile for an ASP.NET Core application

* Create a .NET Core web application
* Create a Dockerfile in your project folder where the .csproj file resides.
* Add the text below to your Dockerfile for either Linux or [Windows Containers](https://docs.microsoft.com/virtualization/windowscontainers/about/). They pull either Windows or Linux containers depending on what mode is set in [Docker Desktop for Windows](https://docs.docker.com/docker-for-windows/).
* The Dockerfile assumes that your application is called aspnetapp. Change the Dockerfile to use the DLL file of your project.

FROM mcr.microsoft.com/dotnet/core/sdk:2.2 AS build-env

WORKDIR /app

# Copy csproj and restore as distinct layers

COPY \*.csproj ./

RUN dotnet restore

# Copy everything else and build

COPY . ./

RUN dotnet publish -c Release -o out

# Build runtime image

FROM mcr.microsoft.com/dotnet/core/aspnet:2.2

WORKDIR /app

COPY --from=build-env /app/out .

ENTRYPOINT ["dotnet", "aspnetapp.dll"]

1. To make your build context as small as possible add a [.dockerignore file](https://docs.docker.com/engine/reference/builder/#dockerignore-file) to your project folder (.csproj) and copy the following into it.

bin\

obj\

Build and run the Docker image

1. Open a command prompt and navigate to your **project** folder.
2. Use the following commands to build and run your Docker image:

$ docker build -t aspnetapp .

$ docker run -d -p 8080:80 --name myapp aspnetapp

View the web page running from a container

* Go to [localhost:8080](http://localhost:8080/) to access your app in a web browser.
* You can get the IP address of your container with the following steps:
  1. Run docker inspect -f "{{ .NetworkSettings.Networks.nat.IPAddress }}" myapp
  2. Copy the container IP address and paste into your browser. (For example, 172.16.240.197)