

# Containerizing an ASP.NET Application

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**Erik Dahl**

PRINCIPAL ARCHITECT

@dahlsailrunner knowyourtoolset.com



# Overview



## Add container support to an ASP.NET application

- Impact on project
- Docker Desktop
- Run and debug

## Examine Dockerfile

## Building container images with layers

## Localhost services?

- Visual Studio Containers window



# Demo



Add Docker Support to UI project

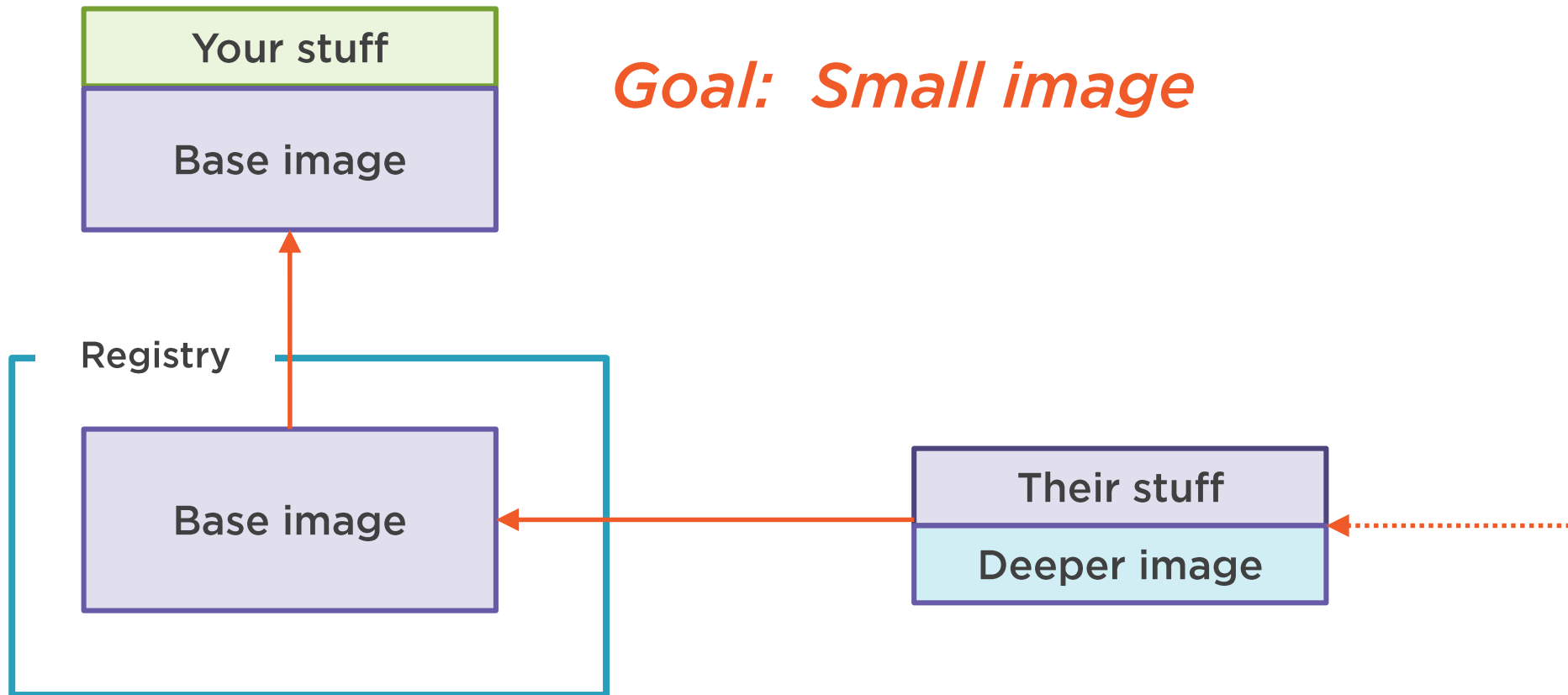
What just happened?

Run and debug

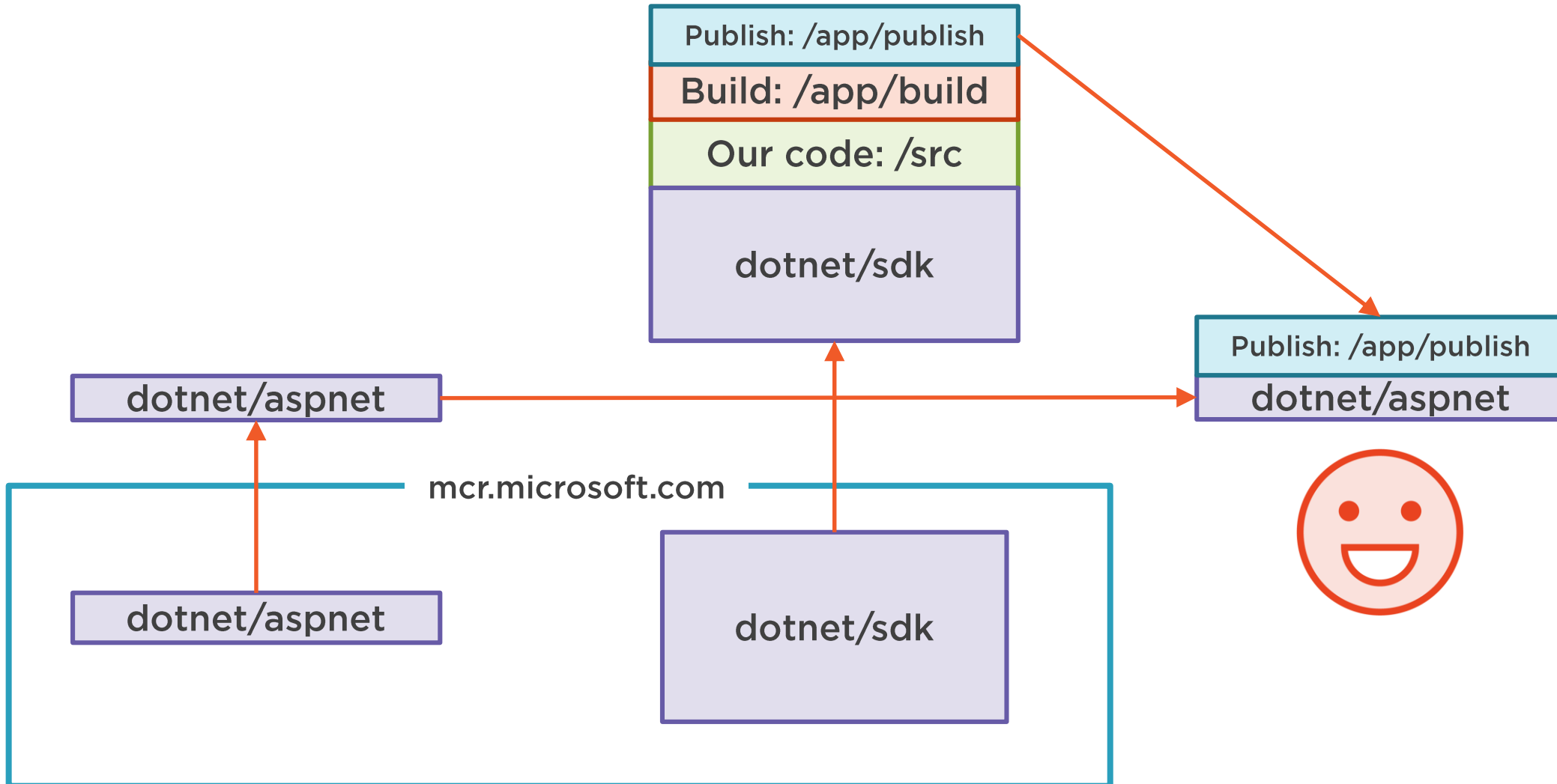
Inspect Dockerfile



# Layers and Building Container Images



# Building ASP.NET Containers



```
FROM mcr.microsoft.com/dotnet/aspnet:5.0-buster-slim AS  
base
```

```
WORKDIR /app
```

```
EXPOSE 80
```

```
EXPOSE 443
```

```
FROM mcr.microsoft.com/dotnet/sdk:5.0-buster-slim AS  
build
```

```
WORKDIR /src
```

```
COPY ["Globomantics.Core/Globomantics.Core.csproj",  
"Globomantics.Core/"]
```

```
RUN dotnet restore
```

```
"Globomantics.Core/Globomantics.Core.csproj"
```

```
COPY . .
```

```
WORKDIR "/src/Globomantics.Core"
```

```
RUN dotnet build "Globomantics.Core.csproj" -c Release -o  
/app/build
```

```
FROM build AS publish
```

```
RUN dotnet publish "Globomantics.Core.csproj" -c Release  
-o /app/publish
```

```
FROM base AS final
```

```
WORKDIR /app
```

```
COPY --from=publish /app/publish .
```

```
ENTRYPOINT ["dotnet", "Globomantics.Core.dll"]
```

◀ Set up base image with aspnet runtime and expose ports

◀ Use full sdk as build container

◀ Restore packages and build project

◀ Alias build as publish and run dotnet publish

◀ Copy published files into final image



# Demo



Run UI project in container

Look at Visual Studio Containers window

- Open shell in container

Check for logs in Seq

- What's wrong?



# Summary



## Containerized an ASP.NET application

- Use Dockerfile in build pipelines
- Run and debug locally

## How containers are built

## Multi-stage nature of building ASP.NET apps

## Visual Studio tooling

## Updated to refer to host service





Up Next:

Running an ASP.NET Application with SSL  
using Docker Compose

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