

# Docker container-Pushing images

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## What are Docker Images?

Docker images are templates used to create containers. They contain the application code, dependencies, and settings needed to run the application.

## Pushing Images to Docker Hub

Docker Hub is a cloud-based repository where you can store and share your Docker images. To push an image to Docker Hub, follow these steps:

### Step 1: Create a Docker Hub Account

If you haven't already, create a free account on Docker Hub at [hub.docker.com](https://hub.docker.com).

### Step 2: Login to Docker CLI

Run the following command in your terminal:

```
docker login
```

Enter your Docker Hub username and password when prompted.

### Step 3: Tag Your Image

Tag your image with your Docker Hub username and the name of your repository. For example, if you want to push an image called `my-web-app` to your `john-doe` repository, run:

```
docker tag my-web-app john-doe/my-web-app
```

### Step 4: Push Your Image

Push your tagged image to Docker Hub using the following command:

```
docker push john-doe/my-web-app
```

This will upload your image to Docker Hub.

## Example Use Case

Let's say you have a simple web server application written in Node.js. You can create a Dockerfile to build an image for this app, then push it to Docker Hub.

## Dockerfile

```
FROM node:14

WORKDIR /app

COPY package*.json ./

RUN npm install

COPY . .

CMD ["npm", "start"]
```

This Dockerfile uses the official Node.js 14 image as a base and installs your app's dependencies. It then copies your code into the container and sets the default command to `npm start`.

### Building and Pushing Your Image

Build your image using:

```
docker build -t my-web-app .
```

Then, tag and push it to Docker Hub:

```
docker tag my-web-app john-doe/my-web-app
docker push john-doe/my-web-app
```

Your `my-web-app` image is now available on Docker Hub!

Remember to replace `john-doe` with your actual Docker Hub username.