

# Follow the below steps to configure and run a Docker image on an EC2 instance

## Step 1: Launch an EC2 Instance

1. "Log into AWS Console" and navigate to the "EC2 Dashboard".
2. Click on "Launch Instance".
3. Choose an "Amazon Machine Image (AMI)". Select an OS (e.g., **\*\*Amazon Linux 2\*\***, **\*\*Ubuntu\*\***).
4. Select an "Instance Type" (e.g., `t2.micro` for free tier).
5. Configure your "security group":
  - Allow "SSH (port 22)" for your IP address.
  - If your Docker container exposes services (e.g., web app), allow those ports (e.g., HTTP `80`, HTTPS `443`).
6. Click "Launch" and connect via SSH once the instance is running.

## Step 2: Install Docker

1. "Connect to your EC2 instance" using SSH:

Bash:

###

```
ssh -i your-key.pem ec2-user@your-ec2-instance-public-dns
```

###

2. Update the instance:

Bash:

###

```
sudo yum update -y # for Amazon Linux
```

# OR

```
sudo apt update -y # for Ubuntu
```

###

### 3. Install Docker:

For “Amazon Linux”:

Bash:

###

```
sudo amazon-linux-extras install docker
```

###

For “Ubuntu”:

Bash:

###

```
sudo apt install docker.io
```

###

### 4. Start Docker service:

Bash

###

```
sudo service docker start
```

###

### 5. Add the EC2 user to the Docker group (so you don't need `sudo` for Docker commands):

Bash:

###

```
sudo usermod -aG docker ec2-user
```

```
# Logout and log back in to apply the group change
```

###

## Step 3: Pull Docker Image

1. Log in again after applying the Docker group change.

2. Pull your Docker image from Docker Hub or any private registry:

Bash:

###

```
docker pull your-docker-image
```

###

If it's a private registry, you might need to log in first:

Bash:

###

docker login

###

## Step 4: Run the Docker Container

1. Run the container:

Bash

###

docker run -d -p 80:80 your-docker-image

###

This command:

- Runs the container in “detached mode” (`-d`).
- Maps “port 80 of the host” (EC2 instance) to “port 80 of the container” (`-p 80:80`).

2. Verify the container is running:

Bash:

###

docker ps

###

## Step 5: Access the Application

- Open a browser and navigate to the “public IP or DNS” of your EC2 instance (e.g., `http://your-ec2-public-ip`).

## Step 6: Set Up Auto-Start (Optional)

To ensure Docker starts on instance reboot:

1. Enable Docker service at startup:

Bash:

###

```
sudo systemctl enable docker
```

```
###
```

## 2. Automatically start your container:

You can add a systemd service or include the `docker run` command in a startup script.