

# Using Docker Compose to Set Up an Nginx Server for Static Content

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## 1 Introduction

In this guide, we will explain how to use Docker Compose to set up an Nginx server that serves static content. The provided configuration uses the `nginx:latest` Docker image to run the Nginx web server and serve static files from a local directory.

## 2 Docker Compose Configuration

Here is the Docker Compose configuration to set up the Nginx server:

```
services:
  static:
    image: nginx:latest
    container_name: static
    ports:
      - "8080:80" # Expose port 80 on localhost
    volumes:
      - ./nginx.conf:/etc/nginx/nginx.conf:ro
      - ./static/data:/usr/share/nginx/html
```

## 3 Explanation of the Configuration

This Docker Compose configuration defines a service called `static`, which uses the `nginx:latest` image to run the Nginx server. Below is an explanation of the options used:

- **image: nginx:latest:** This specifies the Docker image to use for the Nginx server. The `nginx:latest` image is the latest official version of Nginx.
- **container\_name: static:** This option assigns the name `static` to the container. This is useful for managing the container.

- **ports:** - **"8080:80"**: This binds port 8080 on the host machine to port 80 inside the container. This means that the Nginx server will be accessible on **localhost:8080** from the host machine, while the container uses port 80 internally.
- **volumes:** This section mounts local directories into the container:
  - **./nginx.conf:/etc/nginx/nginx.conf:ro**: This mounts a custom Nginx configuration file from the local machine (**./nginx.conf**) into the container at **/etc/nginx/nginx.conf**. The **:ro** suffix ensures that the file is mounted in read-only mode.
  - **./static/data:/usr/share/nginx/html**: This mounts a local directory **./static/data** to the default HTML root directory of Nginx inside the container (**/usr/share/nginx/html**). This directory will contain the static files that Nginx will serve.

## 4 Steps to Set Up the Nginx Server

Follow these steps to set up the Nginx server with Docker Compose:

1. Run the following command to start the Nginx server in detached mode:

```
docker-compose up -d
```

This will pull the **nginx:latest** image, create the container, and start the Nginx server.

2. The Nginx server will now be accessible at **localhost:8080**. Open a web browser and navigate to **http://localhost:8080** to see the static content being served.

## 5 Accessing and Modifying Static Content

The static content (e.g., HTML files, images) will be served from the **./static/data** directory. You can update this directory with new content, and Nginx will automatically serve it.

## 6 Conclusion

Using Docker Compose to run an Nginx server is a quick and easy way to serve static content. By customizing the Nginx configuration and mounting local directories, you can easily manage your static website or application. This approach is suitable for development, testing, or even production environments, depending on your needs.