

Day 9: Docker Networking, Volumes, and Compose

◊ Objective

To understand Docker networking, data persistence using volumes, and orchestration using Docker Compose.

◊ What I Learned

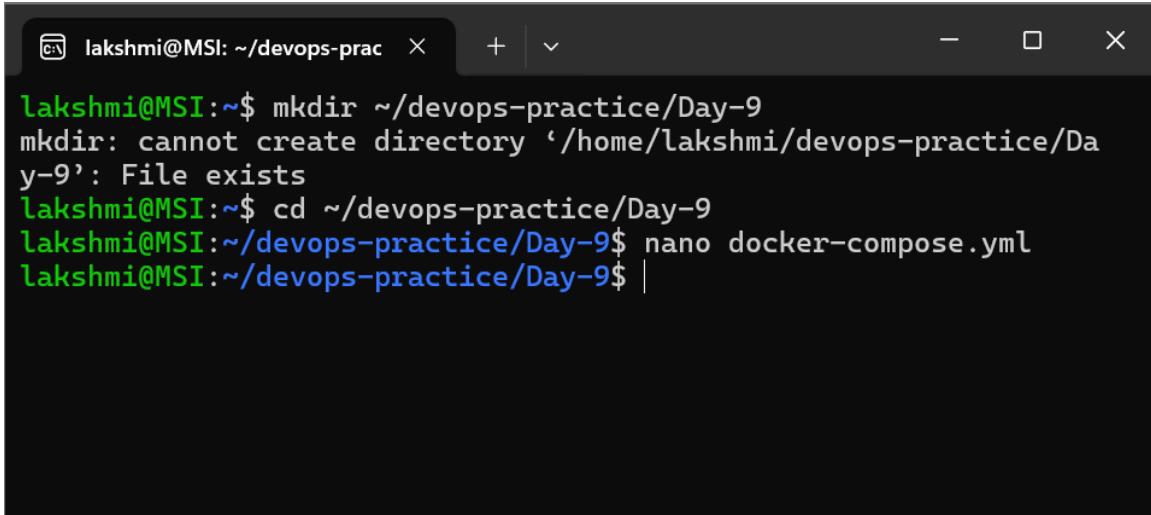
- How Docker containers communicate using networks
- How to persist data using volumes
- How to use Docker Compose to manage multi-container applications

◊ Steps Followed

Step 1: Created Project Folder

```
mkdir ~/devops-practice/Day-9
```

```
cd ~/devops-practice/Day-9
```



A terminal window titled 'lakshmi@MSI: ~/devops-prac'. The command 'mkdir ~devops-practice/Day-9' is run, resulting in an error message: 'mkdir: cannot create directory '/home/lakshmi/devops-practice/Day-9': File exists'. Then, 'cd ~devops-practice/Day-9' is run, followed by 'nano docker-compose.yml' to create the configuration file.

```
lakshmi@MSI:~$ mkdir ~devops-practice/Day-9
mkdir: cannot create directory '/home/lakshmi/devops-practice/Day-9': File exists
lakshmi@MSI:~$ cd ~devops-practice/Day-9
lakshmi@MSI:~/devops-practice/Day-9$ nano docker-compose.yml
lakshmi@MSI:~/devops-practice/Day-9$ |
```

Step 2: Created docker-compose.yml file

```
version: '3'
services:
  web:
    image: nginx
    ports:
      - "8080:80"
```

A screenshot of a terminal window titled "lakshmi@MSI: ~/devops-prac". The window shows a file named "docker-compose.yml" being edited with the nano text editor. The content of the file is:

```
GNU nano 7.2              docker-compose.yml
version: "3"
services:
  web:
    image: nginx
    ports:
      - "8080:80"
```

The terminal window includes standard nano key bindings at the bottom:

^G Help ^O Write Out [Read 7 Lines] ^W Where Is ^K Cut ^T Execute
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify

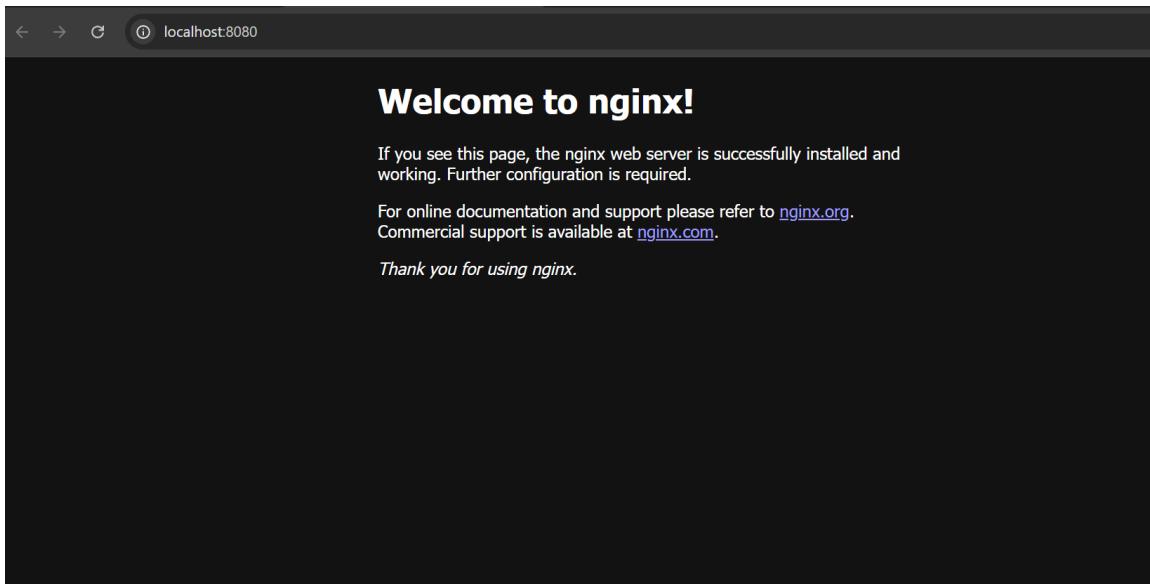
Step 3: Started Services with Docker Compose

docker-compose up -d

Step 4: Verified Container is Running

docker ps

🌐 Opened: http://localhost:8080 to confirm NGINX was running



Step 5: Stopped and Removed the Container

docker-compose down

```
Lakshmi@MSI:~/devops-practice/Day-9$ docker-compose up -d
Starting day-9_web_1 ... done
lakshmi@MSI:~/devops-practice/Day-9$ docker-compose down
Stopping day-9_web_1 ... done
Removing day-9_web_1 ... done
Removing network day-9_default
lakshmi@MSI:~/devops-practice/Day-9$ |
```

❖ GitHub Upload

- Added docker-compose.yml to Day-9 folder
- Pushed to GitHub successfully

The screenshot shows a GitHub repository interface. At the top, there's a list of files and their status:

File	Action	Time
Day-5	Completed Day 5: Python ...	3 weeks ago
Day-6	Completed Day 6: Advance...	3 weeks ago
Day-7	Day 7: AWS S3 automation scri...	2 weeks ago
Day-8	Day 8: Docker Basics - Built...	2 weeks ago
Day-9	Day 9: Docker Networking,...	8 hours ago
README.md	Create README.md	3 weeks ago

Below this is a preview of the README.md file, which contains the following content:

Day 1: Linux Basics – Commands, File System, Users & Permissions

☑ Conclusion

This task helped me understand the basics of:

- Docker container networking
- Using volumes for persistent data
- Managing services with Docker Compose