

EXP NO: 09	RUNNING MULTIPLE DOCKER CONTAINERS USING DOCKER COMPOSE.
DATE:	

AIM:

To run multiple Docker containers using Docker Compose, enabling efficient management, networking, and deployment of containerized applications.

PROCEDURE:

Step 1: Create a project folder named html-cluster and navigate to it.

Step 2: Inside the folder, create three files: index.html, nginx.conf, and docker-compose.yml.

Step 3: Write an index.html file with basic HTML content to be served.

Step 4: Configure nginx.conf to serve index.html from the root directory.

Step 5: Define a docker-compose.yml file to run three Nginx containers on different ports and connect them via a network.

Step 6: Run **docker-compose up -d** to start the cluster and verify it by visiting <http://localhost:8081>, <http://localhost:8082>, and <http://localhost:8083>.

Step 7: Use **docker ps** to check running containers and **docker-compose down** to stop and remove them when needed.

index.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Simple Page</title>
</head>
<body>
  <h1>Welcome to My Simple Page</h1>
  <p>This is a very basic webpage.</p>
</body>
</html>
```

nginx.conf:

```
server {
  listen 80;
  server_name localhost;
  location / {
    root /usr/share/nginx/html;
    index index.html;
  }
}
```

Docker-compose.yml:

version: '3.9'

services:

web-node-1:

image: nginx:latest

container_name: web-node-1

volumes:

- ./index.html:/usr/share/nginx/html/index.html
- ./nginx.conf:/etc/nginx/conf.d/default.conf

ports:

- "8081:80"

networks:

- html-cluster

web-node-2:

image: nginx:latest

container_name: web-node-2

volumes:

- ./index.html:/usr/share/nginx/html/index.html
- ./nginx.conf:/etc/nginx/conf.d/default.conf

ports:

- "8082:80"

networks:

- html-cluster

web-node-3:

image: nginx:latest

container_name: web-node-3

volumes:

- ./index.html:/usr/share/nginx/html/index.html
- ./nginx.conf:/etc/nginx/conf.d/default.conf

ports:

- "8083:80"

networks:

- html-cluster

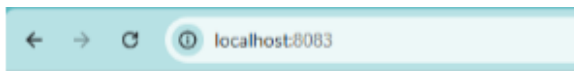
networks:

html-cluster:

driver: bridge

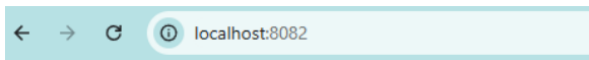
OUTPUT:

```
C:\Users\Admin>mkdir html-cluster
C:\Users\Admin>cd html-cluster
C:\Users\Admin\html-cluster>docker-compose up -d
time="2025-03-26T11:54:20+05:30" level=warning msg="C:\\Users\\Admin\\html-cluster\\docker-compose.yml: the attribute
`version` is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Running 10/10
✔ web-node-2 Pulled 16.4s
✔ c22eb46e871a Pull complete 7.5s
✔ 373fe654e984 Pull complete 7.9s
✔ 6e909acdb790 Pull complete 9.5s
✔ e7e0ca015e55 Pull complete 7.9s
✔ 417c4bccf534 Pull complete 10.1s
✔ 97f5c0f51d43 Pull complete 7.9s
✔ 5eaa34f5b9c2 Pull complete 10.0s
✔ web-node-1 Pulled 16.4s
✔ web-node-3 Pulled 16.4s
[+] Running 4/4
✔ Network html-cluster_html-cluster Created 0.8s
✔ Container web-node-2 Started 0.7s
✔ Container web-node-1 Started 0.7s
✔ Container web-node-3 Started 0.7s
```



Welcome to My Simple Page

This is a very basic webpage.



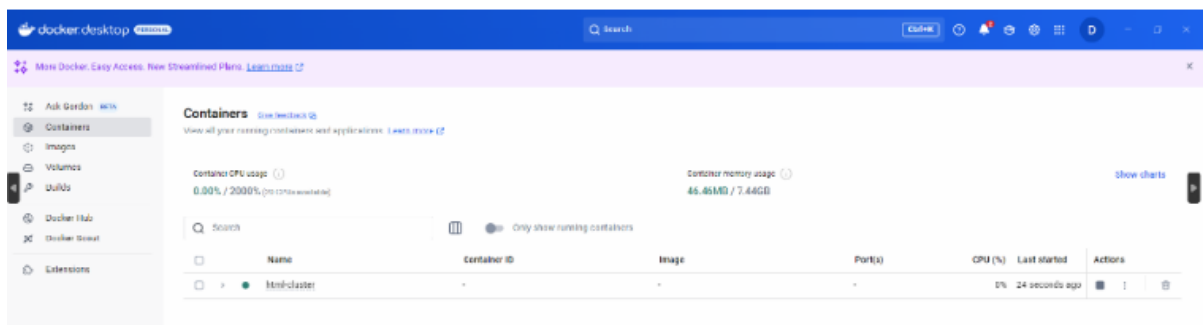
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RESULT:

Thus the ,running multiple Docker containers using Docker Compose was executed successfully.