

EXPERIMENT 6

AIM: Working with Docker Compose File to Control Multiple Containers

Steps to Complete:

Creating compose files

- ❖ Create a directory named nginx in your root.

```
mkdir nginx
```

```
PS C:\Users\manya\OneDrive\Desktop\ACO\Exp5> cd ..
PS C:\Users\manya\OneDrive\Desktop\ACO> mkdir nginx

Directory: C:\Users\manya\OneDrive\Desktop\ACO

Mode                LastWriteTime         Length Name
----                -
d-----          02-12-2023   22:44             nginx

PS C:\Users\manya\OneDrive\Desktop\ACO> |
```

- ❖ Switch to that directory and create a file named docker-compose.yaml

```
cd nginx
```

```
PS C:\Users\manya\OneDrive\Desktop\ACO> cd nginx
PS C:\Users\manya\OneDrive\Desktop\ACO\nginx> |
```

```
vi docker-compose.yml
```

```
▼ nginx
🔥 docker-compose.yml
```

- ❖ Use docker-compose version 2 to create docker-compose.yaml file.
Create a service named "databases". Use image named "mysql"
Map container 3306 port to host machine 3306 port.

Add environment variables named "MYSQL_ROOT_PASSWORD", "MYSQL_DATABASE", "MYSQL_USER" and "MYSQL_PASSWORD" along with corresponding values for all.

```
cat evs.env
```

```
MYSQL_ROOT_PASSWORD=redhat08
MYSQL_DATABASE=nginxdb
MYSQL_USER=root
```

Add another service named "web"
Use image "nginx"

```
cat docker-compose.yml
```

```
version: '3'
services:
  databases:
    image: mysql
    ports:
      - "3307:3306"
    env_file:
      - evs.env
  web:
    image: nginx
    ports:
      - "80:80"
    depends_on:
      - databases
```

Running images using docker-compose

- ❖ Save docker-compose.yaml file and do docker-compose up.

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

```
PS C:\Users\manya\OneDrive\Desktop\ACO\nginx> docker-compose up -d
[+] Running 11/11
  databases 10 layers [#####] 0B/0B Pulled 119.7s
  ✓ 8e0176adc18c Pull complete 42.4s
  ✓ 2d2c52718f65 Pull complete 3.7s
  ✓ d88d03ce139b Pull complete 2.1s
  ✓ 4a7d7f11aa1e Pull complete 8.0s
  ✓ ce5949193e4c Pull complete 6.6s
  ✓ f7f024d4fb329 Pull complete 8.6s
  ✓ 5fc3c840facc Pull complete 86.6s
  ✓ 509068e49488 Pull complete 28.3s
  ✓ cbc847bab598 Pull complete 89.5s
  ✓ 942bef62a146 Pull complete 45.9s
[+] Building 0.0s (0/0) docker:default
[+] Running 3/3
  ✓ Network nginx_default Created 0.2s
  ✓ Container nginx-databases-1 Started 1.1s
  ✓ Container nginx-web-1 Started 0.1s
PS C:\Users\manya\OneDrive\Desktop\ACO\nginx>
```

- ❖ Verify nginx service is up and is accessible on machine.

```
curl localhost:80
```

```
PS C:\Users\manya\OneDrive\Desktop\ACO\nginx> curl 127.0.0.1:80
```

```
StatusCode      : 200
StatusDescription : OK
Content         : <!DOCTYPE html>
                  <html>
                  <head>
                  <title>Welcome to nginx!</title>
                  <style>
                  html { color-scheme: light dark; }
                  body { width: 35em; margin: 0 auto;
                  font-family: Tahoma, Verdana, Arial, sans-serif; }
                  </style>...
RawContent      : HTTP/1.1 200 OK
                  Connection: keep-alive
                  Accept-Ranges: bytes
                  Content-Length: 615
                  Content-Type: text/html
                  Date: Sat, 02 Dec 2023 17:52:10 GMT
```

localhost

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

Stop and remove your docker container using docker-compose.

```
docker-compose down
```

```
PS C:\Users\manya\OneDrive\Desktop\ACO\nginx> docker-compose down
[+] Running 3/3
✓ Container nginx-web-1      Removed
✓ Container nginx-databases-1 Removed
✓ Network nginx_default     Removed
PS C:\Users\manya\OneDrive\Desktop\ACO\nginx> █
```