



UNIVERSITY WITH A PURPOSE

**UNIVERSITY OF PETROLEUM & ENERGY STUDIES**

**Dehradun**

**APPLICATION  
CONTAINERIZATION**

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**Course: B. TECH CSE DevOps (2018-22)**

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# Experiment-3

## Docker Compose

**Step-1:** Install docker-compose.

```
rakshit@rakshit-virtual-machine:~$ docker-compose --version
docker-compose version 1.25.0, build unknown
rakshit@rakshit-virtual-machine:~$
```

**Step-2:** Use docker-compose version 3 to create docker-compose.yml 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.

```
1 MYSQL_ROOT_PASSWORD=123456
2 MYSQL_DATABASE=nginxdb
3 MYSQL_USER=root
4
```

**Step-3:** Add another service named "web". Use image "nginx"

```
1 version: '3'
2 services:
3   databases:
4     image: mysql
5     ports:
6       - "3307:3306"
7     env_file:
8       - envs.env
9   web:
10    image: nginx
11    ports:
12      - "80:80"
13    depends_on:
14      - databases
15
```

```

rakshit@rakshit-virtual-machine:~$ cd lab
rakshit@rakshit-virtual-machine:~/lab$ ls
rakshit@rakshit-virtual-machine:~/lab$ gedit ens.env
rakshit@rakshit-virtual-machine:~/lab$ gedit docker-compose.yml
rakshit@rakshit-virtual-machine:~/lab$ docker-compose up -d
ERROR: Couldn't find env file: /home/rakshit/lab/ens.env
rakshit@rakshit-virtual-machine:~/lab$ gedit docker-compose.yml
rakshit@rakshit-virtual-machine:~/lab$ docker-compose up -d
Creating network "lab_default" with the default driver
Pulling databases (mysql):...
latest: Pulling from library/mysql
6f28985ad184: Extracting [=====>] 24.48MB/27.1MBDownload complete
6f28985ad184: Extracting [=====>] 25.66MB/27.1MB
ee91068b9313: Download complete
b4efa1a4f93b: Download complete
384.2kB/1.419MBwnload complete
74a27d3460f8: Download complete
13.1MB/13.45MBwnload complete
fbce32c99761: Download complete
08545fb3966f: Downloading [=====>] 55.12MB/113.1MB
08545fb3966f: Downloading [=====>] 68.53MB/113.1MB

ef8b369352ae: Download complete
ebd210f0917d: Download complete
121B/121B

```

```

Creating network "lab_default" with the default driver
Pulling databases (mysql):...
latest: Pulling from library/mysql
6f28985ad184: Extracting [=====>] 24.48MB/27.1MBDownload complete
6f28985ad184: Pull complete
e7cd18945cf6: Pull complete
ee91068b9313: Pull complete
b4efa1a4f93b: Pull complete
f220edfa5893: Pull complete
74a27d3460f8: Pull complete
2e11e23b7542: Pull complete
fbce32c99761: Pull complete
08545fb3966f: Pull complete
5b9c076841dc: Pull complete
ef8b369352ae: Pull complete
ebd210f0917d: Pull complete
Digest: sha256:5d1d733f32c28d47061e9d5c2b1fb49b4628c4432901632a70019ec950eda491
Status: Downloaded newer image for mysql:latest
Pulling web (nginx):...
latest: Pulling from library/nginx
6f28985ad184: Already exists
29f7ebf60efd: Pull complete
879a7c160ac6: Pull complete
de58cd48a671: Pull complete
be704f37b5f4: Pull complete
158aac73782c: Pull complete
Digest: sha256:d2925188effb4ddca9f14f162d6fba9b5fab232028aa07ae5c1dab764dca8f9f
Status: Downloaded newer image for nginx:latest
Creating lab_databases_1 ...

```

```

rakshit@rakshit-virtual-machine:~/lab$ docker ps

```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
56f391a5b23d	nginx	"/docker-entrypoint..."	47 seconds ago	Up 44 seconds	0.0.0.0:80->80/tcp	lab_web_1

```

rakshit@rakshit-virtual-machine:~/lab$ docker ps -a

```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
56f391a5b23d	nginx	"/docker-entrypoint..."	52 seconds ago	Up 49 seconds	0.0.0.0:80->80/tcp	lab_w
eb_1						
5083ff03bb7f	mysql	"docker-entrypoint.s..."	58 seconds ago	Exited (1) 50 seconds ago		lab_d
atabases_1						