

# Docker Compose

**Docker Compose:** Docker Compose is a tool for defining and running multi-container applications. It is the key to unlocking a streamlined and efficient development and deployment experience.

1. The Compose file provides a way to document and configure all of the application's service dependencies (databases, queues, caches, web service APIs, etc).
  2. Using the Compose command line tool you can create and start one or more containers for each dependency with a single command ( `docker compose up` ).
- To Compose the docker.
  - 1st we have to install the Docker in Linux {`yum install docker`}
  - After the installation we have to download the docker compose[`sudo curl -fsSL https://github.com/docker/compose/releases/download/v2.30.3/docker-compose-linux-x86_64 -o /home/docker-compose`]. Here we can defined the path where we want to download our docker compose in place of the `/home/docker-compose` we can give any path.
  - Now start the Docker{`systemctl start docker`}
  - Now go to the path of docker-compose file where we downloded.
  - Give the execution permmission to th docker file{`chmod +x docker-compose`}
  - Create one file by extension \*.yml\*{`vi docker-compose.yml`}.
  - Add the container as showan below.

root@ip-172-31-26-39:/usr/local/bin

```
version: '3'
services:
  webapp1:
    image: nginx
    container_name: my_webapp1
    ports:
      - "8000:80"
  webapp2:
    image: nginx
    container_name: my_webapp2
    ports:
      - "8001:80"
```

- Now save and exit(:wq!).
- To the run the container at a time, Give the Command {docker-compose up -d}

```
root@ip-172-31-26-39:/usr/local/bin
Try 'mv --help' for more information.
[root@ip-172-31-26-39 bin]# mv docker-compose.yaml docker-compose.yml
[root@ip-172-31-26-39 bin]# docker-compose up -d
WARN[0000] /usr/local/bin/docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion
Cannot connect to the Docker daemon at unix:///var/run/docker.sock. Is the docker daemon running?
[root@ip-172-31-26-39 bin]# vi docker-compose.yml
[root@ip-172-31-26-39 bin]# docker-compose up -d
WARN[0000] /usr/local/bin/docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion
Cannot connect to the Docker daemon at unix:///var/run/docker.sock. Is the docker daemon running?
[root@ip-172-31-26-39 bin]# systemctl start docker
[root@ip-172-31-26-39 bin]# docker-compose up -d
WARN[0000] /usr/local/bin/docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 4/0
   webapp2 Pulled
     2d429b9e73a6 Pull complete
     9b1039c85176 Pull complete
     9ad567d3b8a2 Pull complete
     773c63ad62e4 Pull complete
     1d2712910bdf Pull complete
     4b0ad47c460 Pull complete
     171eebbdf235 Pull complete
   webapp1 Pulled
     7a3f09908ec Pull complete
[+] Running 3/3
   Network bin_default Created
   Container my_webapp2 Started
   Container my_webapp1 Started
```

- And can see the containers start at time.(to check running Conatiners {docker ps})

```
Container my_webapp2 Started
Container my_webapp1 Started
root@ip-172-31-26-39 bin]# vi docker-compose.yml
root@ip-172-31-26-39 bin]# docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                               NAMES
43a1b53a49b0   nginx    "/docker-entrypoint..." 29 minutes ago Up 7 minutes   0.0.0.0:8001->80/tcp          my_webapp2
78a3f09908ec   nginx    "/docker-entrypoint..." 29 minutes ago Up 7 minutes   0.0.0.0:8000->80/tcp          my_webapp1
root@ip-172-31-26-39 bin]#
```

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