Docker NGINX – Dockerize NGINX with Web Application

Docker NGINX

Docker NGINX Tutorial – We shall learn to run NGINX in a Docker Container on Ubuntu. Following is a step by step guide to dockerize NGINX :

1. Install Docker Engine

Docker is the prerequisite. Follow Install Docker on Ubuntu □, to install docker on your computer with Ubuntu.

2. Pull NGINX from Docker Hub

Run the following command to pull NGINX from Docker Hub to Docker Host.

```
$ sudo docker pull nginx
```

```
arjun@arjun-
VPCEH26EN:~$ sudo

arjun@arjun-VPCEH26EN:~$ sudo docker pull nginx
[sudo] password for arjun:
Using default tag: latest
latest: Pulling from library/nginx
afeb2bfd31c0: Pull complete
7ff5d10493db: Pull complete
d2562f1ae1d0: Pull complete
Digest: sha256:aa1c5b5f864508ef5ad472c45c8d3b6ba34e5c0fb34aaea24acf4b0cee33187e
Status: Downloaded newer image for nginx:latest
```

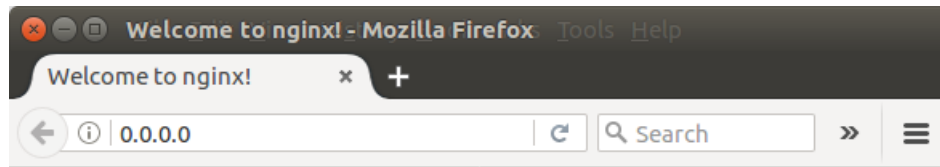## 3. Run Docker with nginx

Run the following command as root user

```
$ docker run –name docker-nginx -p 80:80 -d nginx
```

–name docker-nginx : Name given to the container that is run is docker-nginx **-p 80:80** : the port we are exposing and mapping from local machine port number to that of container, in the format local_machine_port:container_port **-d** : Detached mode – Runs the container in background

```
root@arjun-
VPCEH26EN:/home/a
```

```
root@arjun-VPCEH26EN:/home/arjun# docker run --name docker-nginx -p 80:80 -d nginx
26676407c03db63a74b7ccf17796d034bcd2ffd909a568585f3047e2d52d091c
```

Now the NGINX is running in its default configuration. If you open a browser and hit the url **0.0.0.0:80**, you would get following welcome page from NGINX Web Server.

4. Include a static Web Application in the Docker with NGINX

To include our static Web Application into the Docker Image with NGINX, we shall create a **Dockerfile** (including commands to build image) and an html file with name **index.html** (acting as our web application) in a directory named **nginx-app**.

Dockerfile

```
FROM nginx
COPY
```

```
FROM nginx
COPY . /usr/share/nginx/html
```

index.html

```
<html>
<head>
```

```html
<html>
  <head>
    <title>Docker NGINX Tutorial</title>
  </head>
  <body>
    <h1>NGINX Tutorial - Brought to you by TutorialKart</h1>
    <p>Learn to Dockerize with NGINX and your web application.</p>
    <a href="https://www.tutorialkart.com/docker/docker-tutorial/">Docker Tutorial</a>
    <a href="https://www.tutorialkart.com/nginx/nginx-tutorial/">NGINX Tutorial</a>
  </body>
</html>
```

Run the following command in Terminal from directory – nginx-app, to create image file.

```
$docker build -t nginx-application .
```

root@arjun-
VPCEH26EN:/home/a

```
root@arjun-VPCEH26EN:/home/arjun/workspace/docker/nginx-app# docker build -t nginx-application .
Sending build context to Docker daemon 3.072kB
Step 1/2 : FROM nginx
---> da5939581ac8
Step 2/2 : COPY . /usr/share/nginx/html
---> ae2c0a239687
Removing intermediate container f90e669aafe9
Successfully built ae2c0a239687
Successfully tagged nginx-application:latest
```

Image file is created successfully.

root@arjun-
VPCEH26EN:/home/a

```
root@arjun-VPCEH26EN:/home/arjun/workspace/docker/nginx-app# docker images
REPOSITORY          TAG             IMAGE ID          CREATED          SIZE
nginx-application   latest          ae2c0a239687 2 minutes ago 108MB
nginx               latest          da5939581ac8 7 days ago 108MB
python              latest 26acbad26a2c 7 days ago 690MB
java 8 d23bdf5b1b1b 8 months ago 643MB
hello-world         latest          c54a2cc56cbb 14 months ago 1.85kB
```

Run the following command in Terminal from directory, to run the image file in a container.

```
$ docker run –name docker-nginx -p 80:80 -dnginx-application
```

nginx-application – Docker Image file name.

root@arjun-
VPCEH26EN:/home/a

```
root@arjun-VPCEH26EN:/home/arjun/workspace/docker/nginx-app# docker run --name docker-nginx -p 80:80 -d
nginx-application
1a2ddec91961b76b73e19af28db06e658afcbe2a44e3ae01205d55f9d910922f
```
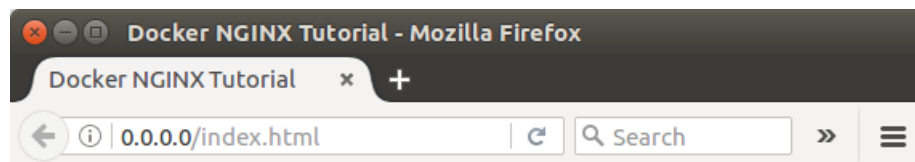
The container docker-nginx is running.

root@arjun-
VPCEH26EN:/home/a

```
root@arjun-VPCEH26EN:/home/arjun/workspace/docker/nginx-app# docker ps -a
CONTAINER ID      IMAGE          COMMAND              CREATED
STATUS          PORTS          NAMES
1a2ddec91961 nginx-application "nginx -g 'daemon ..." About an hour ago   Up About an hour 0.0.0.0:80->80/tcp
docker-nginx
```

Hit the url**0.0.0.0:80/index.html** in any of your browser.

Conclusion :

In this NGINX Tutorial – Docker NGINX, we have learnt to deploy NGINX with Docker

NGINX

⊩ NGINX Tutorial

⊩ NGINX - Install on Ubuntu

⊩ NGINX - Docker