DOCKER SWARM REPLICATION

Steps to create replicas

Step 1:

1. First create three instances with allowing all traffic to that instance
2. Install the docker and start the docker service in every instance
3. In manager server generate the token by the command

   docker swarm init

4. Copy the token as shown in below figure

5. Paste the copied key in second server and third server it will create the worker node in second and third servers as shown in below figure

6. We have to create the service in manager node with replicas by the command is

docker service create --name Netflix --replicas 3 --publish 8080:80 httpd

It will create the service and the manager can distribute the service equally to the workers nodes

7. We create three services from manager server one service is created in manager node and second service is created in first worker node and third service is created in second worker node as shown in below figure

```
[root@ip-172-31-3-112 ~]# docker swarm init
Swarm initialized: current node (na3a1ka7abcswn6b3neu7c1ke) is now a manager.

To add a worker to this swarm, run the following command:

    docker swarm join --token SWMTKN-1-3mr8vk61q2zrrahvxz5lh8c9685hp7nm7evlzs3kschccuky8t-a92vrc5hka2b4h9e4jeivmh9n 172.31.3.112:2377

To add a manager to this swarm, run 'docker swarm join-token manager' and follow the instructions.

[root@ip-172-31-3-112 ~]# docker service create --name netflix --replicas 3 --publish 8080:80 httpd
b4sunyxernhtqkawai9xt38uk
overall progress: 3 out of 3 tasks
1/3: running   [==================================================>]
2/3: running   [==================================================>]
3/3: running   [==================================================>]
verify: Service converged
[root@ip-172-31-3-112 ~]# docker ps
CONTAINER ID   IMAGE          COMMAND              CREATED          STATUS          PORTS     NAMES
40f742ee2dfe   httpd:latest   "httpd-foreground"   26 seconds ago   Up 24 seconds   80/tcp    netflix.3.vib6bgo2oeen1h0sigb9mqns0
[root@ip-172-31-3-112 ~]#
```

Step 2:

1. Up to now we get the image from docker hub but know we can create the image
2. By using Dockerfile we can create the image as shown in below figure

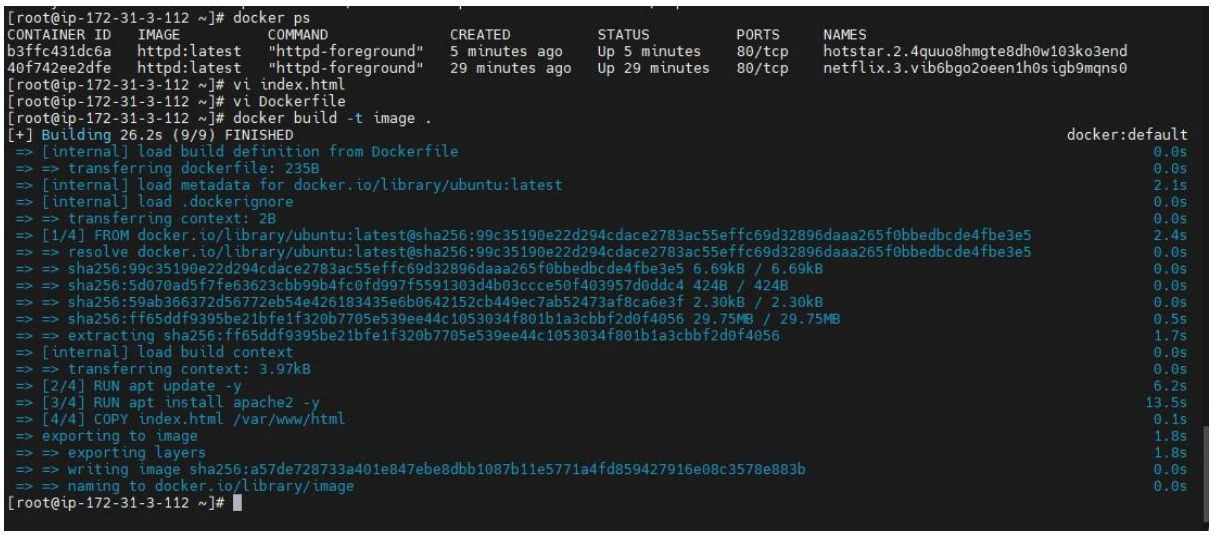
```
FROM ubuntu
RUN apt update -y
RUN apt install apache2 -y
COPY index.html /var/www/html
CMD ["/usr/sbin/apachectl", "-D", "FOREGROUND"]
~
~
```

3. Type html page for login and copy the html code from w3 school

4. Create index.html file in manager node with **vi index.html** and paste the copied html code in editor and save it
5. Build the image by using command is

docker build -t image .

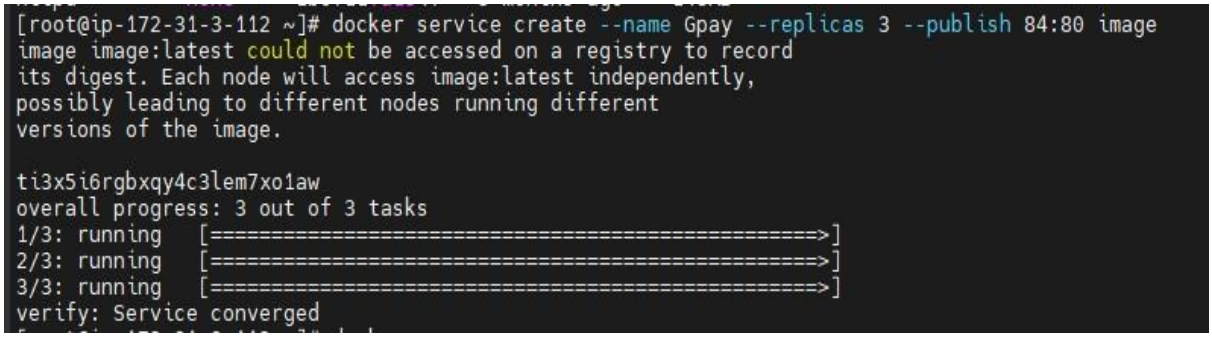
It will build the image as shown in below figure



6. To create the service with created image by the command is

Docker service create –name Gpay –replicas 3 –publish 84:80 image

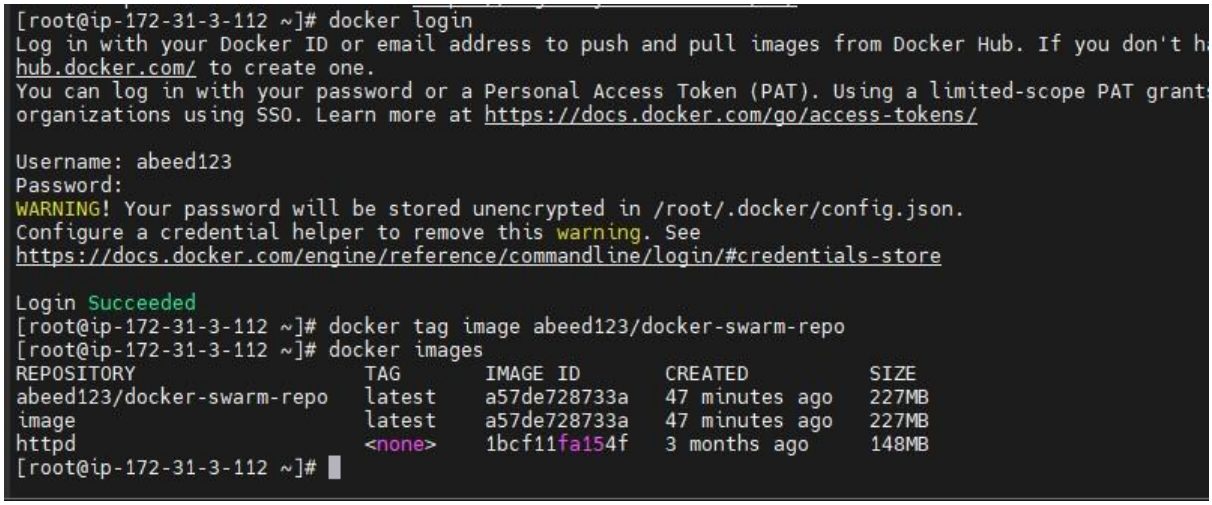
As shown in below figure



Step 3:

1. Go to docker hub and create the repository in docker hub

2. In manager node type **docker login** command it will ask credentials of docker hub
3. Provide user name and password of docker hub as shown in below figure



4. Check the images by using command **docker images** and copy the recently created image
5. Type **docker push abeed123/docker-swarm-repo** it will push to docker hub
6. Now create the service by command

   docker service create --name paytm --replicas 10 --publish 90:80 image

   It will create now effectively
7. If u stop the container wontedly then that container will start immediately in the server