

# **DOCKER MANAGER**

## **SET UP THE REPOSITORY**

```
[root@piyush ~]# yum-config-manager --add-repo  
https://download.docker.com/linux/centos/docker-ce.repo  
[root@piyush ~]# yum clean all  
[root@piyush ~]# yum repolist all
```

## **INSTALLING AND RESTARTING SERVICE**

```
[root@piyush ~]# yum install docker-ce -y  
[root@piyush ~]# systemctl restart docker  
[root@piyush ~]# systemctl enable --now docker  
[root@piyush ~]# systemctl status docker
```

## **PULLING THE IMAGE FROM DOCKER HUB**

```
[root@piyush ~]# docker pull nginx  
[root@piyush ~]# docker pull mariadb  
[root@piyush ~]# docker pull wordpress  
[root@piyush ~]# docker pull phpmyadmin
```

## **SAVING THE IMAGE FOR OTHER NODES**

```
[root@piyush ~]# docker save nginx -o nginx.tar  
[root@piyush ~]# docker save mariadb -o mariadb.tar  
[root@piyush ~]# docker save wordpress -o wordpress.tar  
[root@piyush ~]# docker save phpmyadmin/phpmyadmin  
phpmyadmin.tar
```

## **COPYING THE IMAGE TO DOCKER NODES**

### **Node1**

```
[root@piyush ~]# scp *.tar root@192.168.0.9:/
```

### **Node2**

```
[root@piyush ~]# scp *.tar root@192.168.0.4:/
```

## Node3

```
[root@piyush ~]# scp *.tar root@192.168.0.16:/
```

## CREATING THE DOCKER SWARM MANAGER

```
[root@piyush ~]# docker swarm init --advertise-addr 192.168.0.13
```

## SEE THE CLUSTER

```
[root@piyush ~]# docker node ls
```

| ID                          | HOSTNAME              | STATUS | AVAILABILITY | MANAGER STATUS |
|-----------------------------|-----------------------|--------|--------------|----------------|
| nvu44wns03rorxp2xgnavdcjj * | piyush.expert.com     | Ready  | Active       | Leader         |
| zixk67z9shgrbyl2tgx9izsf    | piyushcl1.example.com | Ready  | Active       |                |
| gsu98r0lu59e0exm7mw8ydo20   | piyushcl2.example.com | Ready  | Active       |                |
| v34rfdvo5mfjzg8fh2i6ybi8u   | piyushcl3.example.com | Ready  | Active       |                |

## OVERLAY NETWORK

```
[root@piyush ~]# docker network create -d overlay wp
```

## CREATING SCERETS FOR MARIADB WORDPRESS PHPMYADMIN

```
[root@piyush ~]# echo "piyush1996" | docker secret create  
root_db_password -
```

```
[root@piyush ~]# echo "piyush1996" | docker secret create  
wp_db_password -
```

```
[root@piyush ~]#echo "piyush1996" | docker secret create  
phpmyadmin_db_password -
```

## CREATING SERVICES

```
[root@piyush ~]#docker service create    --name mariadb    --replicas 1
--network wp    --secret
source=root_db_password,target=root_db_password    --secret
source=wp_db_password,target=wp_db_password    -e
MYSQL_ROOT_PASSWORD_FILE=/run/secrets/root_db_password    -e
MYSQL_PASSWORD_FILE=/run/secrets/wp_db_password    -e
MYSQL_USER=wp    -e MYSQL_DATABASE=wp mariadb
ucinbntzqoztk5uxe5zotqhet
overall progress: 1 out of 1 tasks
1/1: running
[=====>]
verify: Service converged
```

```
[root@piyush ~]#docker service create    --name wordpress    --replicas
1 --network wp    --publish 8080:80    --secret
source=wp_db_password,target=wp_db_password    -e
WORDPRESS_DB_USER=wp    -e
WORDPRESS_DB_PASSWORD_FILE=/run/secrets/wp_db_password
-e WORDPRESS_DB_HOST=mariadb    -e
WORDPRESS_DB_NAME=wp wordpress
12qv3ooburwktgsyt0e1f6thm
overall progress: 1 out of 1 tasks
1/1: running
[=====>]
verify: Service converged
```

```
[root@piyush ~]# docker service create    --name phpmyadmin    --
replicas 1 --network wp --publish 8181:80    --secret
source=phpmyadmin_db_password,target=phpmyadmin_db_password    -
e PHPMYADMIN_DB_USER=phpmyadmin    -e
PHPMYADMIN_DB_PASSWORD_FILE=/run/secrets/phpmyadmin_db_
password    -e PHPMYADMIN_DB_HOST=mariadb
phpmyadmin/phpmyadmin
yy9e37ml4ejuc66m0slt1p2i7
overall progress: 1 out of 1 tasks
1/1: running
[=====>]
```

verify: Service converged

**[root@piyush ~]#**docker service create --name nginx --replicas 4 --  
publish 8282:80 nginx

g1npnydf75nc46b3fpzrbae8i

overall progress: 4 out of 4 tasks

1/4: running

[=====>]

2/4: running

[=====>]

3/4: running

[=====>]

4/4: running

[=====>]

verify: Service converged