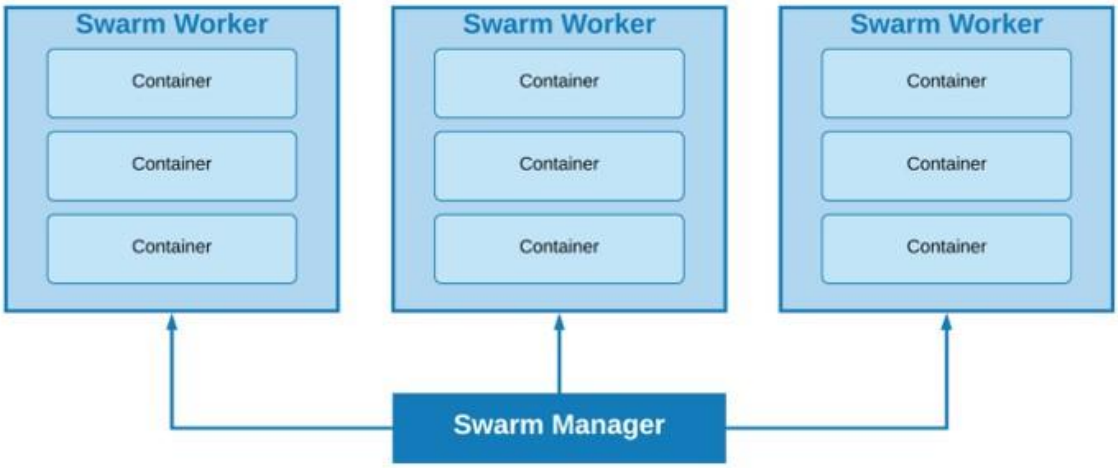
DOCKER SWARM

What is Docker Swarm

1. Docker swarm is an orchestration service it is used to manage multiple containers at the same time
2. It is implemented by cluster
3. Docker Engine helps to create docker swarm
4. Docker swarm is having two nodes
    - Manager Node
    - Worker Node

Docker Swarm Architecture



Steps to create docker swarm

Step 1:

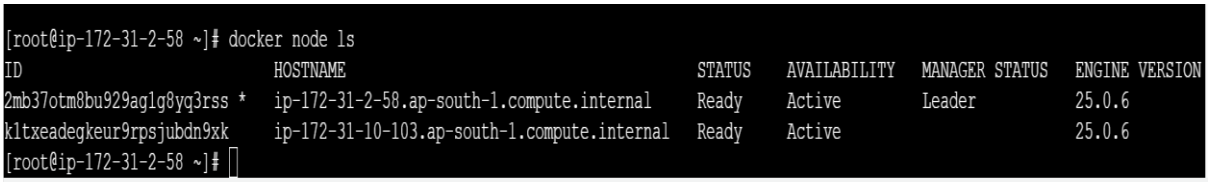
1. First install the docker packages in terminal and start the docker
2. Allow all traffic for the manager server
3. To create the manager node in terminal the command is

docker swarm init	It is manager node in terminal

Step 2:

1. Create the second server that is worker node
2. Allow all the traffic to that second server
3. Install the docker packages in the second server and start the docker service
4. Copy the generated token in the manager server and paste in the worker server
5. Then worker node is created in second server
6. List the nodes in manager server by using command

docker node ls	To list the nodes



7. To create the service by the command is

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

   It is used to create the service from manager server then manager can take decision where the service to be install worker or manager
8. To see the services by the command

docker service ls	To list the services

```
verify: Service converged
[root@ip-172-31-2-58 ~]# docker service ls
ID             NAME       MODE         REPLICAS   IMAGE          PORTS
xfz0u4vufkyn   aha        replicated   1/1        httpd:latest   *:8082->80/tcp
f660e75trq9i   flipkart   replicated   1/1        httpd:latest   *:8081->80/tcp
zgubwu2t6fh4   netflix    replicated   1/1        httpd:latest   *:8080->80/tcp
[root@ip-172-31-2-58 ~]#
```

9. I created up to three services but in worker node it having only one the manager can assign only one service to worker as shown in below figure

```
[root@ip-172-31-10-103 ~]# docker ps
CONTAINER ID   IMAGE          COMMAND              CREATED         STATUS         PORTS     NAMES
bb2adf618031   httpd:latest   "httpd-foreground"   5 minutes ago   Up 5 minutes   80/tcp    flipkart.1.k75l5lg2biglwvgal9em0flf2
[root@ip-172-31-10-103 ~]#
```

Step 3:

1. If we update the image then we need to update the service also by the command is

docker service update --image image name service name

   It is used to update the service
2. To remove the service the command is

docker service rm service name