**Docker Swarm:**

**What is Docker Swarm:**

* A swarm is a group of machines that are running Docker and joined into a cluster
* A cluster is managed by swarm manager
* The machines in swarm can be Physical or Virtual

**Advantages:**

Let’s take an example

You have 100 containers,

🡪You need to do - Health check on every container

🡪 Ensure all containers are up running on every system

🡪Scaling the containers up or down depending on the load

🡪Adding updates/changes to all the containers

Orchestration - managing and controlling multiple Docker containers as a single service Tools available - Docker Swarm, Kubernetes, Apache Mesos

Example:

* First we have launch any one server and we have to install docker

docker-machine create --driver hyperv manager1 🡪 Windows

docker-machine create --driver virtualbox manager1 🡪 Mac

Now I will create machine using the below command and name it as Manager1

**$docker-machine create –driver hyper manager1**

New machine created with manager name, to list it

**$docker-machine env manager1**

If you want to check the ip address of new server name it as manager1 please hit below command

**$docker-machine ip manager1**

**Step2:**

Now I will create worker machines (nodes) from the same server

Using same command we will create worksers also but name I will give different

**$ docker-machine create –driver hyper Worker1**

**$ docker-machine create –driver hyper Worker2**

Now if I run the command **$docker-machine ls** , it will display all machines which I created

But for three machines ip address will be different

**Step3:**

Now we have to give connection between the three machines

$docker-machine ssh manager1 🡪 Once we enter this command we will enter into manager1 machine

$docker-machine ssh worker1 🡪 Same here also

$docker-machine ssh worker2 🡪 Here also same

Step4:

Now we have to install Docker Swarm in the manager1 machine