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Application Containerization Lab

EXPERIMENT-8

Deploying docker swarm service

Terminal Host 1

```
Your Interactive Bash Terminal. A safe place to learn and execute commands.

$ docker swarm init
Swarm initialized: current node (vwqnoziapmyo3n8ac6ydqwnhg) is now a manager.

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

    docker swarm join --token SWMTKN-1-3ba7yz238vjwzfxfbkuh6fuzzhnhnpq049ic0xhlj
dy16ygkmg-cbm2p2ccbjlgp2umncebaip75 172.17.0.29:2377

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

$ docker node ls
ID                            HOSTNAME            STATUS              AVAILABILI
TY        MANAGER STATUS      ENGINE VERSION
vwqnoziapmyo3n8ac6ydqwnhg *   host01              Ready               Active
          Leader              19.03.13
b2e7h87c6q14qysaawkmcwn5t     host02              Ready               Active
                              19.03.13
```

Terminal Host 2

```
Your Interactive Bash Terminal. A safe place to learn and execute commands.

$ docker swarm join --token SWMTKN-1-3ba7yz238vjwzfxfbkuh6fuzzhnhnpq049ic0xhljdy16ygkmg-cbm2p2ccbjlgp2umncebaip75 172.17.0.29:2377
This node joined a swarm as a worker.
$
```

Terminal Host 1

```
$ docker network create -d overlay skynet
yas78szhojsxvrx6n5zgj8n0n
$ docker network ls
NETWORK ID          NAME                DRIVER              SCOPE
2968edbbae84        bridge              bridge              local
1027c25565a9        docker_gwbridge     bridge              local
8b89e3388c32        host                host                local
krae9yy7fbgs        ingress             overlay             swarm
b3dc159371bf        none                null                local
yas78szhojsx        skynet              overlay             swarm
$
```

Terminal Host 2

```
Your Interactive Bash Terminal. A safe place to learn and execute commands.

$ docker swarm join --token SWMTKN-1-3ba7yz238vjwzfxfbkuh6fuzzhnhnpq049ic0xhljdy16ygkmg-cbm2p2ccbjlgp2umncebaip75 172.17.0.29:2377
This node joined a swarm as a worker.
$
```

Terminal Host 1

```
$ docker service create --name http --network skynet --replicas 2 -p 80:80 katac
oda/docker-http-server
lvpa9tjadgnek1kms8sq2pxsv
overall progress: 2 out of 2 tasks
1/2: running
2/2: running
verify: Service converged
$ docker service ls
ID                  NAME                MODE                REPLICAS
IMAGE                               PORTS
lvpa9tjadgne        http                replicated          2/2
katacoda/docker-http-server:latest   *:80->80/tcp
$ docker ps
CONTAINER ID        IMAGE                               COMMAND             CRE
ATED             STATUS              PORTS               NAMES
600faa993a2e        katacoda/docker-http-server:latest   "/app"              34
seconds ago      Up 33 seconds       80/tcp              http.1.2d3gn6phor5nc6n7
8e921v5s8
$
```

Terminal Host 2

```
Your Interactive Bash Terminal. A safe place to learn and execute commands.

$ docker swarm join --token SWMTKN-1-3ba7yz238vjwzfxfbkuh6fuzzhnhnpq049ic0xhljdy16ygkmg-cbm2p2ccbj1gp2umncebaip75 172.17.0.29:2377
This node joined a swarm as a worker.
$ docker service ls
Error response from daemon: This node is not a swarm manager. Worker nodes can't be used to view or modify cluster state. Please run this command on
a manager node or promote the current node to a manager.
$ docker ps
CONTAINER ID        IMAGE                               COMMAND             CREATED             STATUS              PORTS               NAMES
508d46d1f61f        katacoda/docker-http-server:latest   "/app"              38 seconds ago      Up 37 seconds       80/tcp              http.2.qomk4
h1oqdw15im7pjod386ux
$
```

Terminal Host 1

```
$ curl host01
<h1>This request was processed by host: 508d46d1f61f</h1>
$ docker service ps http
ID                  NAME                IMAGE                               NOD
E                   DESIRED STATE       CURRENT STATE           ERROR
  PORTS
2d3gn6phor5n        http.1              katacoda/docker-http-server:latest   hos
t01                 Running             Running 15 minutes ago

qomk4h1oqdw1        http.2              katacoda/docker-http-server:latest   hos
t02                 Running             Running 15 minutes ago

$
```

Terminal Host 2

```
$
```

Terminal Host 1

```
$ docker service inspect --pretty http

ID:             1vpa9tjadgnek1kms8sq2pxsv
Name:           http
Service Mode:   Replicated
 Replicas:      2
Placement:
UpdateConfig:
 Parallelism:   1
 On failure:    pause
 Monitoring Period: 5s
 Max failure ratio: 0
 Update order:      stop-first
RollbackConfig:
 Parallelism:   1
 On failure:    pause
 Monitoring Period: 5s
 Max failure ratio: 0
 Rollback order:    stop-first
ContainerSpec:
```

Terminal Host 2

```
$
```

Terminal Host 1

```
$ docker service scale http=5
http scaled to 5
overall progress: 5 out of 5 tasks
1/5: running
2/5: running
3/5: running
4/5: running
5/5: running
verify: Service converged
$ docker service ps http
ID                  NAME                IMAGE                                NOD
E                   DESIRED STATE       CURRENT STATE            ERROR
  PORTS
yclwrtrcv69r        http.1              katacoda/docker-http-server:latest   hos
t02                 Running             Running 57 seconds ago

st07gjpigmfn        http.2              katacoda/docker-http-server:latest   hos
t01                 Running             Running 55 seconds ago

57fd9u137zbs        http.3              katacoda/docker-http-server:latest   hos
```

Terminal Host 2

```
$
```

Terminal Host 1

```
$ docker ps
CONTAINER ID        IMAGE                                COMMAND             CRE
ATED              STATUS              PORTS               NAMES
be4444b7fc05        katacoda/docker-http-server:latest   "/app"              42
seconds ago       Up 40 seconds       80/tcp              http.3.57fd9u137zbsec9
i4z5xa91e1
a6ee2103d2ab        katacoda/docker-http-server:latest   "/app"              Abo
ut a minute ago   Up About a minute   80/tcp              http.2.st07gjpigmfn22n
nyohn3ox4a
$
```

Terminal Host 2

```
$ docker ps
CONTAINER ID        IMAGE                                COMMAND             CREATED              STATUS              PORTS               NAMES
6f7dc0ffd622        katacoda/docker-http-server:latest   "/app"              51 seconds ago       Up 47 seconds       80/tcp              http.4.ma71
c6aqy8d21to2fauphraup
d91adf050aca        katacoda/docker-http-server:latest   "/app"              51 seconds ago       Up 47 seconds       80/tcp              http.5.wmef
yul9tuz6uetf3vwf8abwt
877d5011986a        katacoda/docker-http-server:latest   "/app"              About a minute ago   Up About a minute   80/tcp              http.1.yc1w
rtrcv69rgh51aq31sja9q
$
```

Terminal Host 1

```
$ docker service rm http
http
$ docker service ls
ID                  NAME                MODE                REPLICAS
IMAGE               PORTS
$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED
STATUS              PORTS               NAMES
$
```

Terminal Host 2

```
$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS               NAMES
$
```