

Phase5-4.3 Container Deployment Using Docker Swarm

docker swarm init

```
Administrator: Command Prompt
f2f9a145d7ad  phpcode  "/usr/sbin/apache2 -..."  5 hours ago  Up 4 seconds  0.0.0.0:80->80/tcp  My-phpContainer

C:\Windows\System32\Docker>docker images
REPOSITORY          TAG             IMAGE ID        CREATED        SIZE
akshugupta/phpcode  latest          e63db0d31f26   5 hours ago    276MB
phpcode              latest          e63db0d31f26   5 hours ago    276MB

C:\Windows\System32\Docker>docker push akshugupta/phpcode
Using default tag: latest
The push refers to repository [docker.io/akshugupta/phpcode]
75ad554d702e: Layer already exists
37e22f2dd6f0: Layer already exists
8ac2071bfe17: Layer already exists
ada2ffdb9be2: Layer already exists
02cfla290523: Layer already exists
a43ad5ba93f8: Layer already exists
59c56aeefb4: Layer already exists
latest: digest: sha256:b27c5e8c009a5e2c97e5e7bd7509104b6853efe8f3192655746f75bfac191e1f size: 1785

C:\Windows\System32\Docker>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                NAMES
f2f9a145d7ad   phpcode   "/usr/sbin/apache2 -..."  5 hours ago    Up 9 minutes  0.0.0.0:80->80/tcp    My-phpContainer

C:\Windows\System32\Docker>docker swarm init
Swarm initialized: current node (miv438hooskyqbtn0umqp3pa3) is now a manager.

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

    docker swarm join --token SWMTKN-1-5tn4x4h8bekbufwv9isgnw5nbpzg7amenbc5su1zpvli3tavfy-0fk74fn6cyzpk4uc17o5zhyy7 192.168.65.4:2377

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

C:\Windows\System32\Docker>
```

docker swarm init

```
Administrator: Command Prompt
f2f9a145d7ad  phpcode  "/usr/sbin/apache2 -..."  5 hours ago  Up 4 seconds  0.0.0.0:80->80/tcp  My-phpContainer

C:\Windows\System32\Docker>docker images
REPOSITORY          TAG             IMAGE ID        CREATED        SIZE
akshugupta/phpcode  latest          e63db0d31f26   5 hours ago    276MB
phpcode              latest          e63db0d31f26   5 hours ago    276MB

C:\Windows\System32\Docker>docker push akshugupta/phpcode
Using default tag: latest
The push refers to repository [docker.io/akshugupta/phpcode]
75ad554d702e: Layer already exists
37e22f2dd6f0: Layer already exists
8ac2071bfe17: Layer already exists
ada2ffdb9be2: Layer already exists
02cfla290523: Layer already exists
a43ad5ba93f8: Layer already exists
59c56aeefb4: Layer already exists
latest: digest: sha256:b27c5e8c009a5e2c97e5e7bd7509104b6853efe8f3192655746f75bfac191e1f size: 1785

C:\Windows\System32\Docker>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                NAMES
f2f9a145d7ad   phpcode   "/usr/sbin/apache2 -..."  5 hours ago    Up 9 minutes  0.0.0.0:80->80/tcp    My-phpContainer

C:\Windows\System32\Docker>docker swarm init
Swarm initialized: current node (miv438hooskyqbtn0umqp3pa3) is now a manager.

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

    docker swarm join --token SWMTKN-1-5tn4x4h8bekbufwv9isgnw5nbpzg7amenbc5su1zpvli3tavfy-0fk74fn6cyzpk4uc17o5zhyy7 192.168.65.4:2377

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

C:\Windows\System32\Docker>docker swarm init --advertise-addr 80
```

docker swarm init --advertise-addr 80

```
Administrator: Command Prompt
f2f9a145d7ad  phpcode  "/usr/sbin/apache2 -..."  5 hours ago  Up 4 seconds  0.0.0.0:80->80/tcp  My-phpContainer

C:\Windows\System32\docker>docker images
REPOSITORY          TAG             IMAGE ID        CREATED        SIZE
akshugupta/phpcode  latest         e63db0d31f26   5 hours ago   276MB
phpcode             latest         e63db0d31f26   5 hours ago   276MB

C:\Windows\System32\docker>docker images
REPOSITORY          TAG             IMAGE ID        CREATED        SIZE
akshugupta/phpcode  latest         e63db0d31f26   5 hours ago   276MB
phpcode             latest         e63db0d31f26   5 hours ago   276MB

C:\Windows\System32\docker>docker push akshugupta/phpcode
Using default tag: latest
The push refers to repository [docker.io/akshugupta/phpcode]
75ad554d702e: Layer already exists
37e22f2dd6f0: Layer already exists
8ac2071bfe17: Layer already exists
ada2ffdb89be2: Layer already exists
02cf1a290523: Layer already exists
a43ad5ba93f8: Layer already exists
59c56ae1fb4: Layer already exists
latest: digest: sha256:b27c5e8c009a5e2c97e5e7bd7509104b6853efe8f3192655746f75bfac191e1f size: 1785

C:\Windows\System32\docker>docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                    NAMES
f2f9a145d7ad  phpcode       "/usr/sbin/apache2 -..."  5 hours ago   Up 9 minutes  0.0.0.0:80->80/tcp       My-phpContainer

C:\Windows\System32\docker>docker swarm init
Swarm initialized: current node (miv438hooskyqbtn0umqp3pa3) is now a manager.

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

    docker swarm join --token SWMTKN-1-5tn4x4h8bekbufwv9isgnw5nbpzg7amenbc5su1zpvli3tavfy-0fk74fn6cyzpk4ucl7o5zhyy7 192.168.65.4:2377

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

C:\Windows\System32\docker>docker swarm init --advertise-addr 80
Error response from daemon: This node is already part of a swarm. Use "docker swarm leave" to leave this swarm and join another one.

C:\Windows\System32\docker>docker swarm init --advertise-addr 80_
```

docker swarm join --token SWMTKN-1-5tn4x4h8bekbufwv9isgnw5nbpzg7amenbc5su1zpvli3tavfy-0fk74fn6cyzpk4ucl7o5zhyy7 192.168.65.4:2377

```
Select Administrator: Command Prompt
f2f9a145d7ad  phpcode  "/usr/sbin/apache2 -..."  5 hours ago  Up 4 seconds  0.0.0.0:80->80/tcp  My-phpContainer

C:\Windows\System32\docker>docker images
REPOSITORY          TAG             IMAGE ID        CREATED        SIZE
akshugupta/phpcode  latest         e63db0d31f26   5 hours ago   276MB
phpcode             latest         e63db0d31f26   5 hours ago   276MB

C:\Windows\System32\docker>docker images
REPOSITORY          TAG             IMAGE ID        CREATED        SIZE
akshugupta/phpcode  latest         e63db0d31f26   5 hours ago   276MB
phpcode             latest         e63db0d31f26   5 hours ago   276MB

C:\Windows\System32\docker>docker push akshugupta/phpcode
Using default tag: latest
The push refers to repository [docker.io/akshugupta/phpcode]
75ad554d702e: Layer already exists
37e22f2dd6f0: Layer already exists
8ac2071bfe17: Layer already exists
ada2ffdb89be2: Layer already exists
02cf1a290523: Layer already exists
a43ad5ba93f8: Layer already exists
59c56ae1fb4: Layer already exists
latest: digest: sha256:b27c5e8c009a5e2c97e5e7bd7509104b6853efe8f3192655746f75bfac191e1f size: 1785

C:\Windows\System32\docker>docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                    NAMES
f2f9a145d7ad  phpcode       "/usr/sbin/apache2 -..."  5 hours ago   Up 9 minutes  0.0.0.0:80->80/tcp       My-phpContainer

C:\Windows\System32\docker>docker swarm init
Swarm initialized: current node (miv438hooskyqbtn0umqp3pa3) is now a manager.

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

    docker swarm join --token SWMTKN-1-5tn4x4h8bekbufwv9isgnw5nbpzg7amenbc5su1zpvli3tavfy-0fk74fn6cyzpk4ucl7o5zhyy7 192.168.65.4:2377

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

C:\Windows\System32\docker>docker swarm init --advertise-addr 80
Error response from daemon: This node is already part of a swarm. Use "docker swarm leave" to leave this swarm and join another one.

C:\Windows\System32\docker>
```

docker node ls

```
Administrator: Command Prompt
02cf1a298523: Layer already exists
a43ad5ba93f8: Layer already exists
59c56ae1fb4: Layer already exists
latest: digest: sha256:b27c5e8c009a5e2c97e5e7bd7509104b6853efe8f3192655746f75bfac191e1f size: 1785

C:\Windows\System32\Docker>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED    STATUS    PORTS                   NAMES
f2f9a145d7ad   phpcode   "/usr/sbin/apache2 -..." 5 hours ago Up 9 minutes    0.0.0.0:80->80/tcp   My-phpContainer

C:\Windows\System32\Docker>docker swarm init
Swarm initialized: current node (miv438hooskyqbtn0umqp3pa3) is now a manager.

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

    docker swarm join --token SWMTKN-1-5tn4x4h8bekbufwv9isgnw5nbpzg7amenbc5su1zpvli3tavfy-0fk74fn6cyzpk4uc17o5zhy7 192.168.65.4:2377

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

C:\Windows\System32\Docker>docker swarm init --advertise-addr 80
Error response from daemon: This node is already part of a swarm. Use "docker swarm leave" to leave this swarm and join another one.

C:\Windows\System32\Docker>docker node ls
ID                HOSTNAME        STATUS    AVAILABILITY    MANAGER STATUS    ENGINE VERSION
miv438hooskyqbtn0umqp3pa3 *   docker-desktop  Ready     Active           Leader             24.0.2

C:\Windows\System32\Docker>
```

docker service create -p 80:80 --name webserver phpcode

```
Administrator: Command Prompt
02cf1a298523: Layer already exists
a43ad5ba93f8: Layer already exists
59c56ae1fb4: Layer already exists
latest: digest: sha256:b27c5e8c009a5e2c97e5e7bd7509104b6853efe8f3192655746f75bfac191e1f size: 1785

C:\Windows\System32\Docker>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED    STATUS    PORTS                   NAMES
f2f9a145d7ad   phpcode   "/usr/sbin/apache2 -..." 5 hours ago Up 9 minutes    0.0.0.0:80->80/tcp   My-phpContainer

C:\Windows\System32\Docker>docker swarm init
Swarm initialized: current node (miv438hooskyqbtn0umqp3pa3) is now a manager.

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

    docker swarm join --token SWMTKN-1-5tn4x4h8bekbufwv9isgnw5nbpzg7amenbc5su1zpvli3tavfy-0fk74fn6cyzpk4uc17o5zhy7 192.168.65.4:2377

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

C:\Windows\System32\Docker>docker swarm init --advertise-addr 80
Error response from daemon: This node is already part of a swarm. Use "docker swarm leave" to leave this swarm and join another one.

C:\Windows\System32\Docker>docker node ls
ID                HOSTNAME        STATUS    AVAILABILITY    MANAGER STATUS    ENGINE VERSION
miv438hooskyqbtn0umqp3pa3 *   docker-desktop  Ready     Active           Leader             24.0.2

C:\Windows\System32\Docker>docker service create -p 80:80 --name webserver phpcode
image phpcode:latest could not be accessed on a registry to record
its digest. Each node will access phpcode:latest independently,
possibly leading to different nodes running different
versions of the image.

ndf0yxponejo5ffpxf010r99b
overall progress: 1 out of 1 tasks
1/1: running [=====>]
verify: Service converged

C:\Windows\System32\Docker>
```

docker service ls

```
Administrator: Command Prompt
C:\Windows\System32\Docker>docker node ls
ID                HOSTNAME          STATUS    AVAILABILITY  MANAGER STATUS  ENGINE VERSION
miv438hooskyqbtn0umqp3pa3 *  docker-desktop  Ready    Active         Leader           24.0.2

C:\Windows\System32\Docker>docker service create -p 80:80 --name webserver phpcode
image phpcode:latest could not be accessed on a registry to record
its digest. Each node will access phpcode:latest independently,
possibly leading to different nodes running different
versions of the image.

rdf0yxporejo5ffpxf9l0r99b
overall progress: 1 out of 1 tasks
1/1: running  [=====>]
verify: Service converged

C:\Windows\System32\Docker>docker service ls
ID                NAME              MODE          REPLICAS  IMAGE              PORTS
rdf0yxporejo     webserver         replicated    1/1        phpcode:latest     *:80->80/tcp

C:\Windows\System32\Docker>
```

docker service scale webserver=2

```
Administrator: Command Prompt
C:\Windows\System32\Docker>docker service scale=2
Usage:  docker service COMMAND

Manage Swarm services

Commands:
  create      Create a new service
  inspect     Display detailed information on one or more services
  logs        Fetch the logs of a service or task
  ls          List services
  ps          List the tasks of one or more services
  rm          Remove one or more services
  rollback    Revert changes to a service's configuration
  scale       Scale one or multiple replicated services
  update      Update a service

Run 'docker service COMMAND --help' for more information on a command.

C:\Windows\System32\Docker>docker service ls
ID                NAME              MODE          REPLICAS  IMAGE              PORTS
rdf0yxporejo     webserver         replicated    1/1        phpcode:latest     *:80->80/tcp

C:\Windows\System32\Docker>docker service scale webserver=2
webserver scaled to 2
overall progress: 2 out of 2 tasks
1/2: running  [=====>]
2/2: running  [=====>]
verify: Service converged

C:\Windows\System32\Docker>
```

docker service ls

```
Select Administrator: Command Prompt

C:\Windows\System32\docker>docker service scale=2

Usage:  docker service COMMAND

Manage Swarm services

Commands:
  create      Create a new service
  inspect     Display detailed information on one or more services
  logs        Fetch the logs of a service or task
  ls          List services
  ps          List the tasks of one or more services
  rm          Remove one or more services
  rollback    Revert changes to a service's configuration
  scale       Scale one or multiple replicated services
  update      Update a service

Run 'docker service COMMAND --help' for more information on a command.

C:\Windows\System32\docker>docker service ls
ID                NAME      MODE      REPLICAS  IMAGE              PORTS
rdF0yxporejo      webserver replicated 1/1        phpcode:latest     *:80->80/tcp

C:\Windows\System32\docker>docker service scale  webserver=2
webserver scaled to 2
overall progress: 2 out of 2 tasks
1/2: running [=====>]
2/2: running [=====>]
verify: Service converged

C:\Windows\System32\docker>docker service ls
ID                NAME      MODE      REPLICAS  IMAGE              PORTS
rdF0yxporejo      webserver replicated 2/2        phpcode:latest     *:80->80/tcp

C:\Windows\System32\docker>
```

Docker node ls

Node only one created replica but service node created 2

```
Administrator: Command Prompt

C:\Windows\System32\docker>docker service scale=2

Usage:  docker service COMMAND

Manage Swarm services

Commands:
  create      Create a new service
  inspect     Display detailed information on one or more services
  logs        Fetch the logs of a service or task
  ls          List services
  ps          List the tasks of one or more services
  rm          Remove one or more services
  rollback    Revert changes to a service's configuration
  scale       Scale one or multiple replicated services
  update      Update a service

Run 'docker service COMMAND --help' for more information on a command.

C:\Windows\System32\docker>docker service ls
ID                NAME      MODE      REPLICAS  IMAGE              PORTS
rdF0yxporejo      webserver replicated 1/1        phpcode:latest     *:80->80/tcp

C:\Windows\System32\docker>docker service scale  webserver=2
webserver scaled to 2
overall progress: 2 out of 2 tasks
1/2: running [=====>]
2/2: running [=====>]
verify: Service converged

C:\Windows\System32\docker>docker service ls
ID                NAME      MODE      REPLICAS  IMAGE              PORTS
rdF0yxporejo      webserver replicated 2/2        phpcode:latest     *:80->80/tcp

C:\Windows\System32\docker>docker node ls
ID                HOSTNAME  STATUS  AVAILABILITY  MANAGER STATUS  ENGINE VERSION
miv438hooskyqbtn0umqp3pa3 *          docker-desktop Ready          Active          Leader           24.0.2

C:\Windows\System32\docker>
```

