

Services are the simplest way to make use of a Docker Swarm cluster. In this lesson, we will be discussing Docker services. We will demonstrate how to create and manage services and talk about several important concepts related to services.

## Relevant Documentation

- <https://docs.docker.com/engine/swarm/services/>
- <https://docs.docker.com/engine/swarm/how-swarm-mode-works/services/>
- [https://docs.docker.com/engine/reference/commandline/service\\_create/](https://docs.docker.com/engine/reference/commandline/service_create/)

## Lesson Reference

1. Create a simple service running the `nginx` image.

```
docker service create nginx
```

2. Create an `nginx` service with a specified name, multiple replicas, and a published port.

```
docker service create --name nginx --replicas 3 -p 8080:80 nginx
```

3. Use a template to pass the node hostname to each container as an environment variable.

```
docker service create --name node-hostname --replicas 3 --env NODE_HOSTNAME="{{.Node.Hostname}}" nginx
```

4. Get the container running on the current machine, and print its environment variables to verify that the `NODE_HOSTNAME` variable is set properly.

```
docker ps
docker exec <CONTAINER_ID> printenv
```

5. List the services in the cluster.

```
docker service ls
```

6. List the tasks for a service.

```
docker service ps nginx
```

7. Inspect a service.

```
docker service inspect nginx
docker service inspect --pretty nginx
```

8. Change a service.

```
docker service update --replicas 2 nginx
```

9. Delete a service.

```
docker service rm nginx
```

10. Create a global service.

```
docker service create --name nginx --mode global nginx
```

11. Two different ways to scale a service:

```
docker service update --replicas 3 nginx  
docker service scale nginx=4
```