Moving from Docker Compose to Kubernetes Using Docker Stack

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Module Overview

Enabling Kubernetes and
Docker Stack Support

Understanding Docker Stack Commands

Docker Stack Commands in Action

Enabling Kubernetes and Docker Stack Support

Question:

Can Docker Compose files be used to run containers directly in Kubernetes?

Answer:

Yes, when Docker Desktop is used.

A setting can be enabled in Docker Desktop to allow Docker stack commands to run containers in Kubernetes.
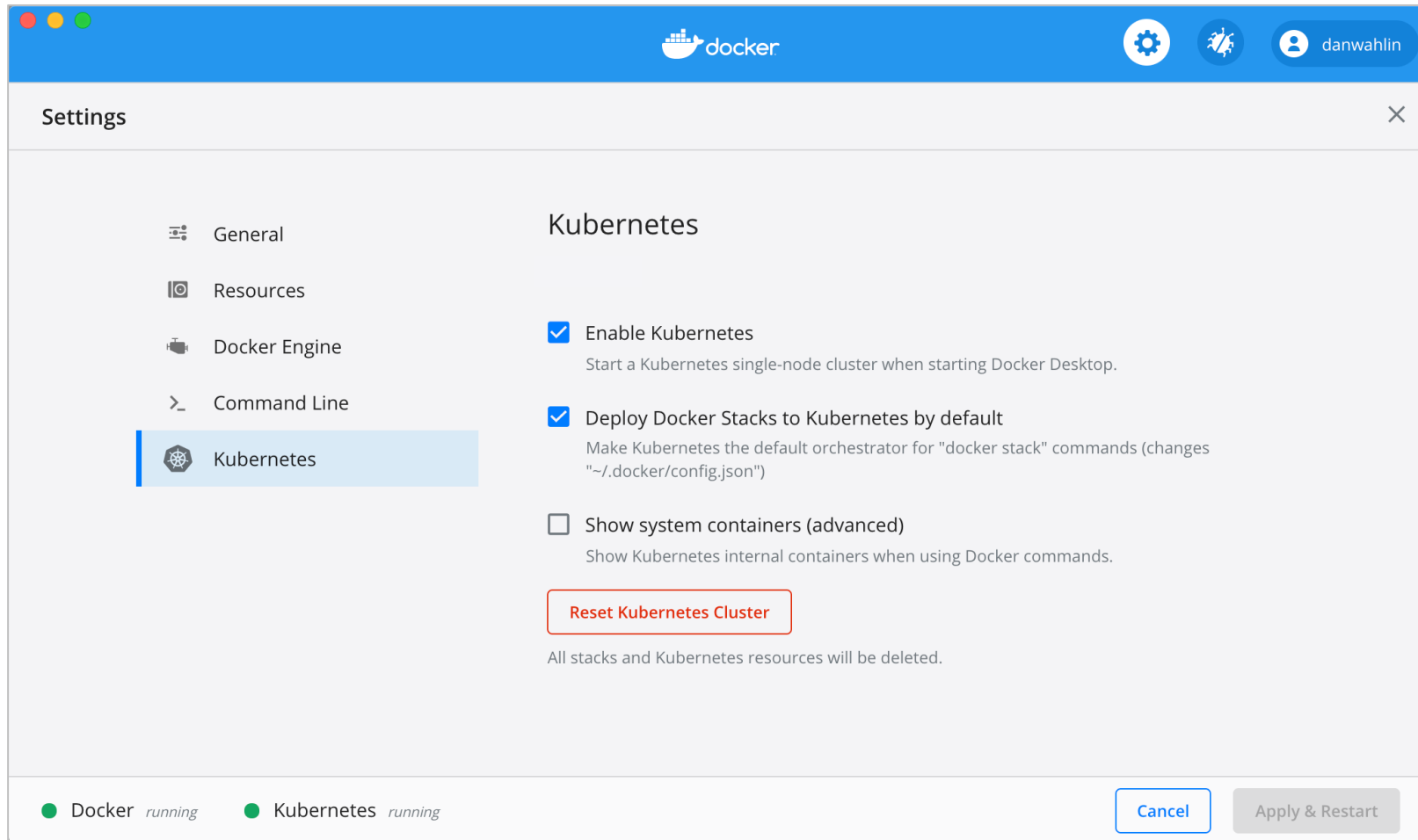
Question:

What are Docker stacks?

Answer:

Docker stack commands can be used to deploy and manage services in a "swarm mode" cluster or in Kubernetes (Docker Desktop required).
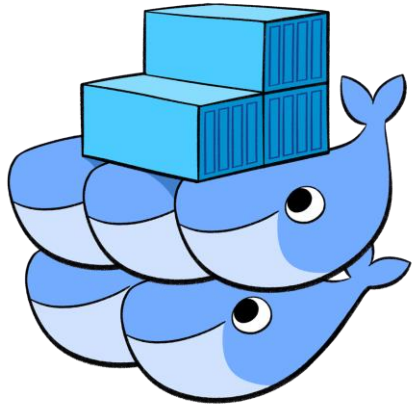
Docker Desktop Kubernetes Support

Understanding Docker Stack Commands

Docker Stack Commands
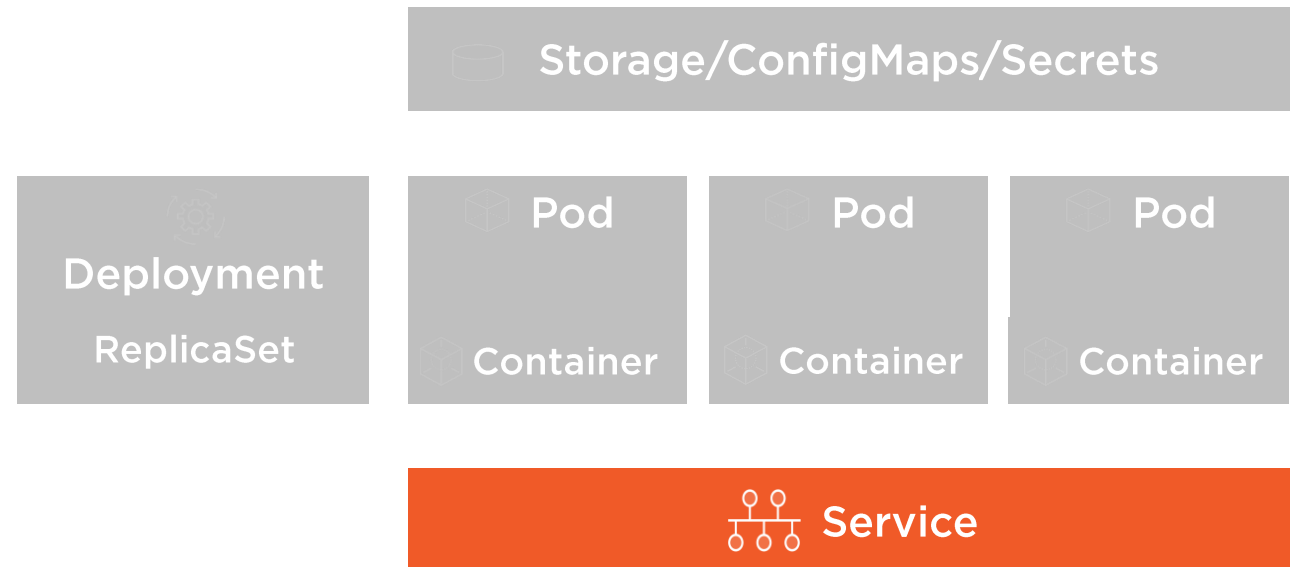
docker stack deploy

docker stack ls

docker stack ps

docker stack rm

docker stack services

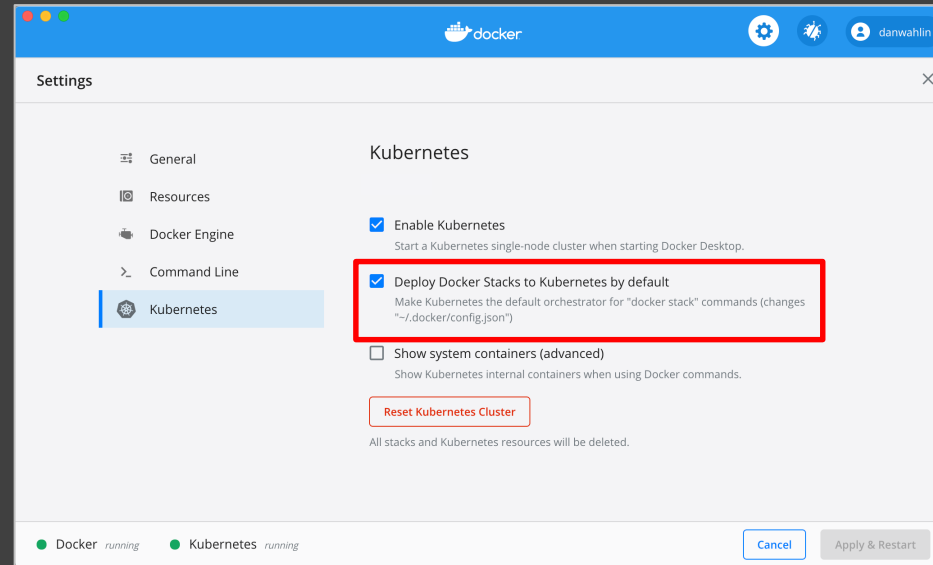# Services in Docker Compose and Kubernetes

YAML

Docker Compose Services

Storage/ConfigMaps/Secrets

Deployment

ReplicaSet

Pod

Container

Pod

Container

Pod

Container

Service

```
docker stack deploy -c docker-compose.yml [name-of-stack]
```


Deploying with the docker stack Command

docker stack commands are normally used to deploy to a swarm.

When Kubernetes and Docker stack are enabled in Docker Desktop, the command can deploy containers to Kubernetes.

```
docker stack ls
```

Listing Deployed Resources

docker stack ls can be used to list deployed stacks.

```
docker stack rm [name-of-stack]
```

Removing a Deployed Stack

docker stack rm can be used to remove services deployed to Kubernetes.

Docker Stack Commands in Action

Code Sample

https://github.com/DanWahlin/Angular-JumpStart

Summary

Docker Desktop supports running Docker stack commands in Kubernetes

Provides a simple way to run Docker Compose services in Kubernetes

Must be enabled in the Docker Desktop Settings/Preferences

Standard Docker stack commands can be used with Docker Compose files