Module-4: Orchestration in Docker

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DEMO-8: Docker Stack

Note: All commands are executed as root.

In this demonstration, we will deploy the multi-container application we deployed earlier in the compose demo as a stack on our swarm cluster.

1. Use the docker stack command to deploy the compose configuration on swarm

```
$ docker stack deploy -c compose.yml <stackName>
```

```
root@docker-1:/home/compose# docker stack deploy -c compose.yml springboot-stack
Ignoring unsupported options: restart

Ignoring deprecated options:

container_name: Setting the container name is not supported.

Creating network springboot-stack_default
Creating service springboot-stack_springbootapp
Creating service springboot-stack_mongo
```

2. We can list the stacks deployed using the docker stack command

```
$ docker stack ls
```

```
root@docker-1:/home/compose# docker stack ls
NAME                  SERVICES          ORCHESTRATOR
springboot-stack      2                 Swarm
```

3. Check the tasks deployed by the stack using stack ps command

```
$ docker stack ps <stackName>
```

```
root@docker-1:/home/compose# docker stack ps springboot-stack
ID              NAME                          IMAGE                         NODE        DESIRED STATE
  CURRENT STATE           ERROR                 PORTS
xvzh27tuz15s    springboot-stack_mongo.1      lerndevops/mongo:latest       docker-1    Running
  Running about a minute ago
pjcluw7lw858      \_ springboot-stack_mongo.1 lerndevops/mongo:latest       docker-3    Shutdown
  Rejected about a minute ago  "invalid mount config for type…"
uzbzbv7hxmrz      \_ springboot-stack_mongo.1 lerndevops/mongo:latest       docker-3    Shutdown
  Rejected 2 minutes ago       "invalid mount config for type…"
z15b8n5r0n6i      \_ springboot-stack_mongo.1 lerndevops/mongo:latest       docker-3    Shutdown
  Rejected 2 minutes ago       "invalid mount config for type…"
s60uzquvbrfm      \_ springboot-stack_mongo.1 lerndevops/mongo:latest       docker-3    Shutdown
  Rejected 2 minutes ago       "invalid mount config for type…"
ytwshj4lqf4n    springboot-stack_springbootapp.1 edureka01/spring-boot-app:latest docker-2    Running
  Running 2 minutes ago
```

4. Check the services in the stack using stack service command

```
$ docker stack services <stackName>
```

```
root@docker-1:/home/compose# docker stack services springboot-stack
ID                      NAME                         MODE          REPLICAS        IMAGE
 PORTS
moak9isk9pfn            springboot-stack_springbootapp  replicated    1/1          edureka01/spring-boot-app:latest
 *:8010->8080/tcp
vh7dvmnbyylk            springboot-stack_mongo          replicated    1/1          lerndevops/mongo:latest
 *:27017->27017/tcp
```

5. To remove a stack, use the stack rm command

```
$ docker stack rm <stackName>
```

```
root@docker-1:/home/compose# docker stack rm springboot-stack
Removing service springboot-stack_mongo
Removing service springboot-stack_springbootapp
Removing network springboot-stack_default
```