Creating a service

A service lets you specify how many copies of your task definition to run and maintain in a cluster.

Steps
1. Select cluster that will run the service.
2. Select tab "Services" and then Button "Create".
3. Select a Task Definition previously created.
4. Select a cluster (If more than one exist).
5. Enter a service name.
6. Select the number of tasks to run (Tasks are task definitions instantiations)
7. Select Min and Max healty percent (Number of running tasks during a deployment enabling you to deploy without using additional cluster capacity).
8. Optional configuration - Elastic Load Balancer | Service Auto Scaling

Creating a service - Elastic Load Balancing configuration

Steps
1. Select "Configure ELB" (ELB must have been created beforehand).
2. On ELB type select "Application Load Balancer". **This type of ELB will allow host to run multiple containers and map dynamic ports** to ELB port listener. Recommended.
3. Select IMA role "ecsServiceRole" to allow ELB access to the ECS resources.
4. Select ELB name (Previously defined).
5. Select container to link to the ELB
6. Select protocol, in this case HTTP port 80.
7. Select Target Group (Previously defined).
8. Hit "Save".

ECS will now configure and launch the service. You can view the created in the Cluster.

Inside the Service we can see now two tasks running. **These are two docker containers running one on each EC2 instance**.

As you can see **the ECS service has taken care of distributing our containers automatically**. We can check the containers are running using the "docker ps" command on each node.

```
CONTAINER ID      IMAGE                 COMMAND         CREATED         STATUS          PORTS
          NAMES
cf2b21f7a739      acanessa/node-app        "npm start"     20 minutes ago    Up 20 minutes     0.0.0.
0:32842->8080/tcp   ecs-task-node-8-image-node-92e4bc9fb584dbb68101
```

Once the service is created we can see relevant information regarding its behavior:

- Status Active. Indicates the service is active (But not necessary that tasks are running)
- Task definition: The task definition that the service is running (previously defined.)
- Desired count: This represents the amount of tasks we want running.
- Pending count: The amount of tasks currently trying to start,
- Running count: The amount of tasks actually running. We want this number to be the same as Desired count.
- Load Balancing: Information regarding how this service and the Elastic Load Balancing interact.
- Events: Very useful. **Will show detailed information about every event for this service. If there is any type of problem this is the place to start looking for information**. In fact, this tab will give us quick access to the task information itself.

Updating a service

Let's say we want to update a service to increase the number of tasks running (scale up our containers). Follow these steps:

- Select "Update" on the Service dashboard
- Chance the number of tasks to 3.
- Select "Update Service".

The service will now execute the update. The ECS agent will communicate with the EC2 instances and direct them to run the new container via Docker Engine.

IMPORTANT: We cannot delete a service if the Desired count (Number of tasks running) is greater than 0.