

Creating a Cluster

An Amazon ECS cluster is a regional grouping of one or more container instances on which you can run task requests. Each account receives a default cluster the first time you use the Amazon ECS service. Clusters may contain more than one Amazon EC2 instance type.

Before we create an Elastic Container Service cluster we need to have at least one EC2 instance ready with the proper configuration (Recommended but not necessary). This means we need to create an EC2 instance, assign the role that will allow it to access ECS and install the ECS agent and the Docker engine (Docker daemon).

Most important steps:

- Get an EC2 instance up and running making sure that the “ecsInstanceRole” (previously defined) is assigned to the instance, otherwise it won’t be able to join the cluster as a node. Also, have in mind that you can’t change the instance type after it has joined to a cluster or the ECS agent will crash. (More research needed).
- Access the EC2 instance and install the ECS agent and Docker engine with the following commands:

```
sudo yum install -y ecs-init
sudo service docker start
sudo start ecs
```

- The EC2 instance is now ready to join the cluster!.
- Go to ECS main dashboard and select “Cluster”.
- Select “Create cluster” and select a name. That’s it! The cluster is created and the EC2 instance should appear in the EC2 instances tab. Make sure “Agent connected” states true, “Status” active and check agent and docker engine version. If the agent status is false, there is a problem between the cluster and the node communication. Check /var/log/ecs in the node for more information.

We can use the CLI to check see the two EC2 instances running!

```
root@ip-172-31-40-103:~# /usr/local/bin/aws ecs list-container-instances --cluster default
{
  "containerInstanceArns": [
    "arn:aws:ecs:us-west-2:520710614288:container-instance/86db3e95-ceeb-4ca2-ab66-fe371e77fd6a",
    "arn:aws:ecs:us-west-2:520710614288:container-instance/89389a81-b9eb-4c70-92d0-49e927272d8e"
  ]
}
```

With the Cluster up and running we can go to task definitions.