Let’s say we need to run multiple microservices in Containers in AWS.

There are multiple Container Orchestration services available like

Docker Swarm

Kubernetes

Mesos

Nomad

Elastic Container Service

ECS is a container orchestrator and manages the whole lifecycle of containers.

We create an ECS Cluster that are important for managing all acontainers. It has a control plane that can manage the lifecycle of containers.

The containers run on virtual machines(EC 2 Instance). These instances will not be managed by us separately.

These instances will have docker/container runtime installed on them.

The ECS control plane manages the communication between ECS and the EC2 Instances.

We do not have to manage the containers but we still need to manage and setup EC2 Instances. We also need to manage the OS and Docker runtime on these Instances.

The good thing here is that we have full access over the infrastructure.

**Fargate**

What if we can delegate the task of managing the infrastructure ?

We want container lifecycle to be managed by Aws and the hosting structure managed by AWS.

Instead of creating and provisioning the VM by yourself use Fargate

Fargate is a serverless way to launch containers.You give your container to Fargate and it will analyze how much resources does it need and then Fargate it self will provision automatically provision servers for that container and then it will run container on those servers.

Everytime you hand a new container to Fargate it will follow the same process.You get infra on demand so that saves you money as you pay for what you use and it easily scales up and down.

If you need more access to the underlying Infra you will need to have self managed EC2 Instances.

Under Aws ecosystem you can use

CloudWatch for Monitoring

IAM for User Permissions

Elastic Load Balancer for LoadBalancing

VPC for Networking

If you want to use Kubernetes you can use EKS.

The advantage of using EKS is that if you were using k8 outside Aws you can use it in AWS.

ECS is specific to AWS while EKS is cloud agnostic.

EKS has more resources like Helm.

ECS control plane is free and less complex comparatively.

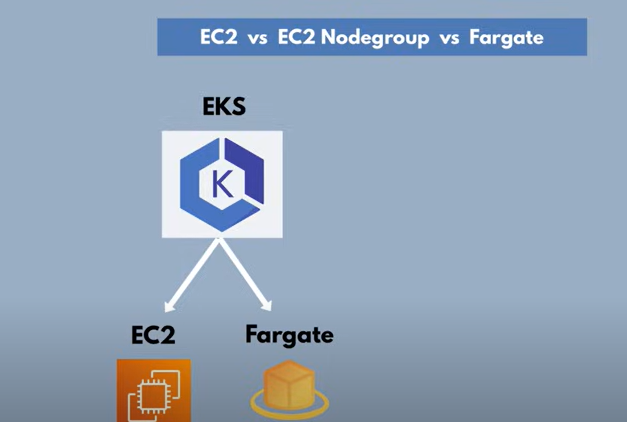
EKS has a Master Node and client nodes. Creation of Master Node is managed by AWS.

You need to create EC2 Instances and add them to K8 and deploy applications on them.

In Kubernetes worker Nodes have k8 processes.

You will be managing EC2 Instance yourself.

You can also use Fargate for EKS.



A screenshot of a computer

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