

Lab 1: Setting Up Your ECS Cluster

1. **Login to AWS Console:** Navigate to the [ECS Console](#).
2. **Create a Cluster:**
 - In the ECS Dashboard, click **Clusters** > **Create Cluster**.
 - Choose **EC2 Linux + Networking** (or **Networking only** for Fargate).
 - Provide a name for the cluster.
 - Configure instance type, number of instances, and networking settings (VPC, subnets, security groups).
 - Select the appropriate EC2 AMI (Amazon Linux 2 recommended) and key pair for SSH access if needed.

▼ Infrastructure Info

Customized

Your cluster is automatically configured for AWS Fargate (serverless) with two capacity providers. Add Amazon EC2 instances.

☒ AWS Fargate (serverless)
Pay as you go. Use if you have tiny, batch, or burst workloads or for zero maintenance overhead. The cluster has Fargate and Fargate Spot capacity providers by default.

☒ Amazon EC2 instances
Manual configurations. Use for large workloads with consistent resource demands.

Auto Scaling group (ASG) | Info
Use Auto Scaling groups to scale the Amazon EC2 instances in the cluster.

Create new ASG ▼

Provisioning model
Select a provisioning model for your instances

☒ On-demand
With on-demand instances, you pay for compute capacity by the hour, with no long-term commitments or upfront payments.

☐ Spot
Amazon EC2 Spot instances let you take advantage of unused EC2 capacity in the AWS cloud. Spot instances are available at up to a 90% discount compared to on-demand prices.

Container instance Amazon Machine Image (AMI)
Choose the Amazon ECS-optimized AMI for your instance.

Amazon Linux 2 (kernel 5.10) ▼

EC2 instance type
Choose based on the workloads you plan to run on this cluster.

t2.micro
i386, x86_64
1 vCPU 1 GiB Memory
Free tier eligible ▼

EC2 instance role
An instance role is used by Amazon EC2 instances to make AWS API requests. If you don't already have an instance IAM role created, we can create one for you.

Create new role ▼

Create cluster Info

An Amazon ECS cluster groups together tasks, and services, and allows for shared capacity and common configurations. All of your tasks, services, and capacity must belong to a cluster.

Cluster configuration

Cluster name

Cluster name must be 1 to 255 characters. Valid characters are a-z, A-Z, 0-9, hyphens (-), and underscores (_).

Default namespace - *optional*

Select the namespace to specify a group of services that make up your application. You can overwrite this value at the service level.



▼ Infrastructure Info

[Customized](#)

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☒ AWS Fargate (serverless)

Pay as you go. Ideal if you have tiny, batch, or burst workloads or for zero maintenance overhead. The cluster has Fargate and Fargate

Container instance Amazon Machine Image (AMI)

Choose the Amazon ECS-optimized AMI for your instance.

EC2 instance type

Choose based on the workloads you plan to run on this cluster.

i386, x86_64

1 vCPU 1 GiB Memory

Free tier eligible

EC2 instance role

An instance role is used by Amazon EC2 instances to make AWS API requests. If you don't already have an instance IAM role created, we can create one for you.

Desired capacity

Specify the number of instances to launch in your cluster.

Minimum

Maximum

SSH Key pair

If you do not specify a key pair, you can't connect to the instances via SSH unless you choose an AMI that is configured to allow users another way to log in.

[Create a new key pair](#)

Root EBS volume size

You can increase the size of the root EBS volume to allow for greater image and container storage.

A min of 30 GiB and a max of 16,384 GiB is allowed.

External instances using **ECS Anywhere** can be registered after cluster creation is complete.

▼ Network settings for Amazon EC2 instances [Info](#)

By default Amazon EC2 instances are launched in the default subnets for your default VPC. To use the non-default VPC, specify the VPC and subnets.

VPC

Use a VPC with public and private subnets. By default, VPCs are created for your AWS account. To create a new VPC, go to the [VPC Console](#).

vpc-02a1884b0b47c48d1
default

Subnets

Select the subnets where your tasks run. We recommend that you use three subnets for production.

Choose subnets

Clear current selection

subnet-01bc6e1eb8475b565 ✕
us-east-1a 172.31.80.0/20

subnet-03711536ccf022901 ✕
us-east-1b 172.31.16.0/20

Security group [Info](#)

Choose an existing security group or create a new security group.

☒ Use an existing security group

☐ Create a new security group

Security group name

Choose an existing security group.

Choose security groups

sg-0bb7fb3a956422383 ✕
default

Auto-assign public IP [Info](#)

Choose whether to auto-assign a public IP to the Amazon EC2 instances

Use subnet setting

Click **Create** to provision the cluster.

✓ Cluster ecs-cluster-1 has been created successfully.

[View cluster](#)

[Amazon Elastic Container Service](#) > Clusters

Clusters (1) [Info](#)



Create cluster

Search clusters

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Cluster	Services	Tasks	Container instances	CloudWatch monitoring	Capacity
ecs-cluster-1	0	No tasks running	2 EC2	✓ Default	ASG

Services

Search

[Alt+S]

EC2

EFS

S3

CloudFront

CloudShell

IAM

Lambda

CodeCommit

Mumbai

AV

EC2 Dashboard

EC2 Global View

Events

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity

Instances (2) Info

Last updated less than a minute ago

Connect

Instance state

Actions

Launch instances

Find Instance by attribute or tag (case-sensitive)

All states

Instance state = running

Clear filters

< 1 >

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
<input type="checkbox"/>	ECS Instance - ...	i-0205c5de18e9319d1	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b	ec2-65-2-8
<input type="checkbox"/>	ECS Instance - ...	i-003a392f5df052f73	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	ec2-13-23

Select an instance