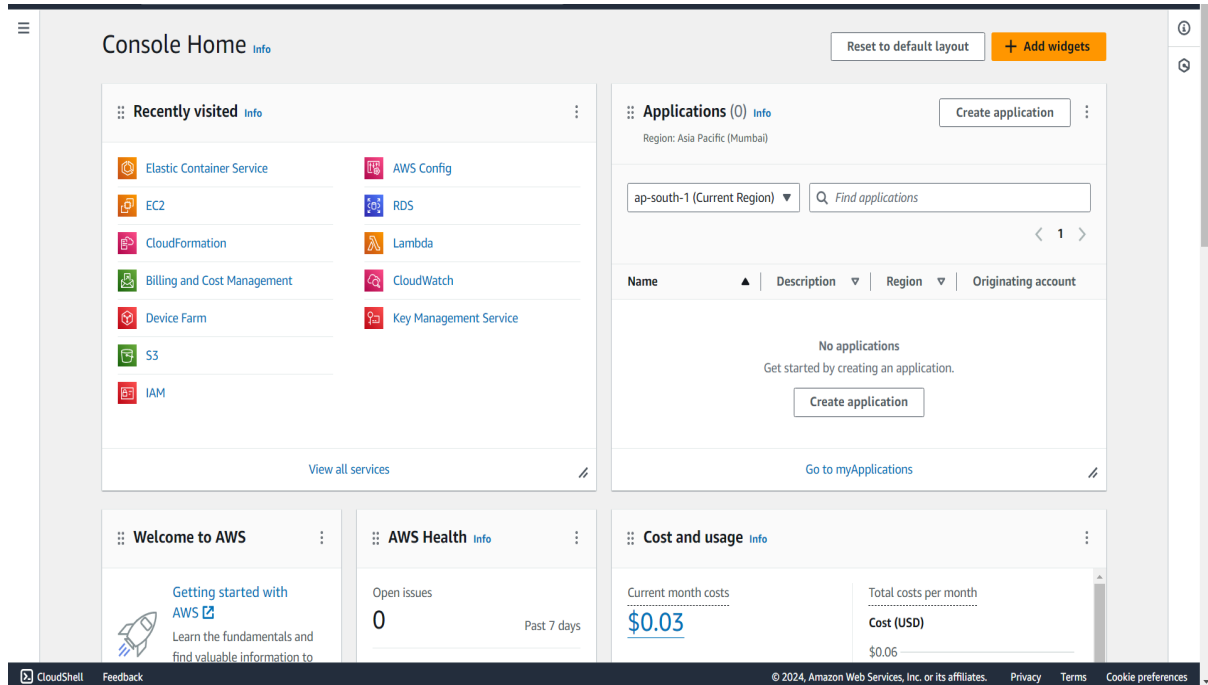
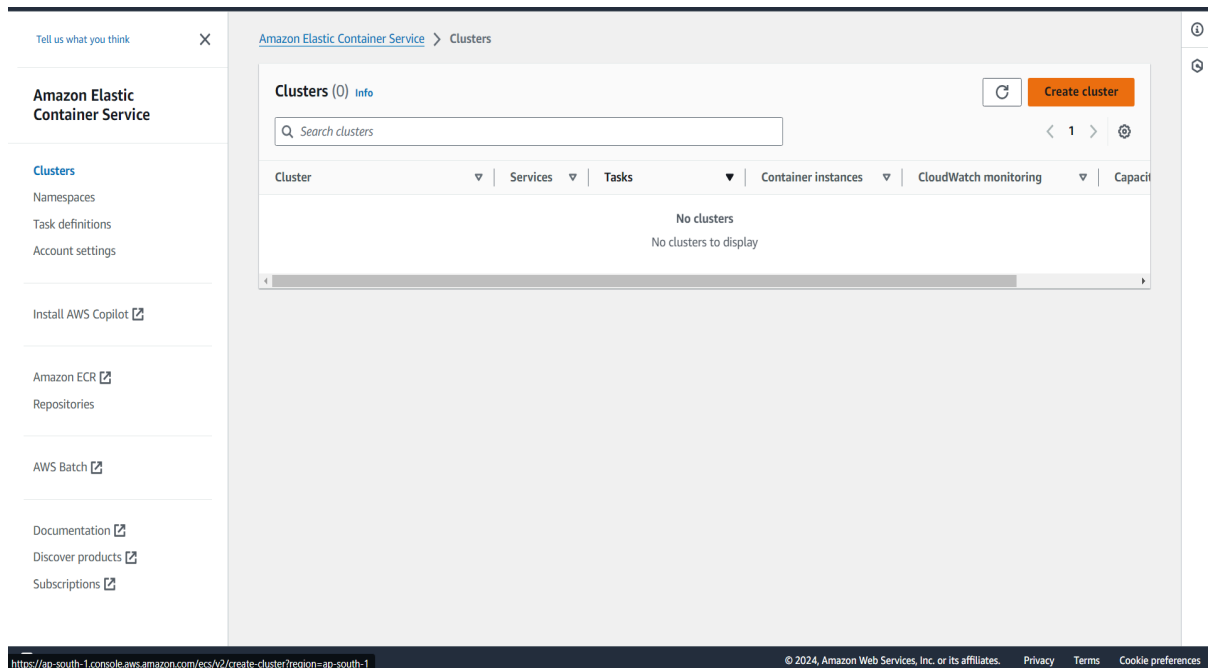


Implementing AWS ECS and Fargate for deploying and managing containerized applications

Step 1: Sign in to aws account



Step 2: Go to 'clusters' in the ECS dashboard and click 'Create cluster'



Step 3: Enter cluster name and select 'AWS Fargate (serverless)' in the Infrastructure, then click 'Create'

The screenshot shows the 'Create cluster' page in the AWS Management Console. On the left is a navigation sidebar with links to 'Amazon Elastic Container Service', 'Clusters', 'Namespaces', 'Task definitions', 'Account settings', 'Install AWS Copilot', 'Amazon ECR', 'Repositories', 'AWS Batch', 'Documentation', 'Discover products', and 'Subscriptions'. The main content area is titled 'Create cluster' and includes a brief description of an Amazon ECS cluster. Below this is the 'Cluster configuration' section, which contains a text input for 'Cluster name' with the value 'tanmayvaji-cluster' and a note about the 255-character limit. The 'Default namespace - optional' section has a search input with the same value. The 'Infrastructure' section is expanded, showing three options: 'AWS Fargate (serverless)' (selected), 'Amazon EC2 instances', and 'External instances using ECS Anywhere'. The 'AWS Fargate' option is marked with a 'Serverless' badge. The footer of the console shows 'CloudShell', 'Feedback', and copyright information for 2024.

Tell us what you think

Create cluster

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

tanmayvaji-cluster

There can be a maximum of 255 characters. The valid characters are letters (uppercase and lowercase), numbers, 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.

tanmayvaji-cluster

▼ Infrastructure

Serverless

Your cluster is automatically configured for AWS Fargate (serverless) with two capacity providers. Add Amazon EC2 instances, or external instances using ECS Anywhere.

☒ 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.

☐ External instances using ECS Anywhere

Manual configurations. Use to add data center compute.

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Step 4: Go to 'Task definition', enter 'Task definition family' and select 'AWS Fargate' as the 'Infrastructure requirements'

The screenshot shows the 'Create new task definition' page in the AWS Management Console. The left sidebar is identical to the previous screenshot. The main content area is titled 'Create new task definition'. The 'Task definition configuration' section has a text input for 'Task definition family' with the value 'tanmayvaji-taskdef'. The 'Infrastructure requirements' section is expanded, showing the 'Launch type' as 'AWS Fargate' (selected). Below this, the 'OS, Architecture, Network mode' section shows 'Operating system/Architecture' set to 'Linux/X86_64' and 'Network mode' set to 'awsvpc'. The footer of the console is the same as in the previous screenshot.

Tell us what you think

Create new task definition

Task definition configuration

Task definition family

tanmayvaji-taskdef

Up to 255 letters (uppercase and lowercase), numbers, hyphens, and underscores are allowed.

▼ Infrastructure requirements

Specify the infrastructure requirements for the task definition.

Launch type

☒ AWS Fargate

Serverless compute for containers.

☐ Amazon EC2 instances

Self-managed infrastructure using Amazon EC2 instances.

OS, Architecture, Network mode

Network mode is used for tasks and is dependent on the compute type selected.

Operating system/Architecture

Linux/X86_64

Network mode

awsvpc

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Step 5: Set 'ec2TaskExecutionRole' as the 'Task role'. Then enter name and url of the docker image then click 'Create'

Tell us what you think

Amazon Elastic Container Service

Clusters

Namespaces

Task definitions

Account settings

Install AWS Copilot

Amazon ECR

Repositories

AWS Batch

Documentation

Discover products

Subscriptions

Task roles - conditional

Task role [Info](#)

A task IAM role allows containers in the task to make API requests to AWS services. You can create a task IAM role from the [IAM console](#).

ecsTaskExecutionRole

Task execution role [Info](#)

A task execution IAM role is used by the container agent to make AWS API requests on your behalf. If you don't already have a task execution IAM role created, we can create one for you.

ecsTaskExecutionRole

Task placement - optional

Task placement constraints are not supported for AWS Fargate launch type.

Container - 1 [Info](#)

Essential container Remove

Container details

Specify a name, container image, and whether the container should be marked as essential. Each task definition must have at least one essential container.

Name Image URI Essential container

httpd httpd:latest Yes

Private registry [Info](#)

Store credentials in Secrets Manager, and then use the credentials to reference images in private registries.

Private registry authentication

Port mappings [Info](#)

Add port mappings to allow the container to access ports on the host to send or receive traffic. For port name, a default will be assigned if left blank.

CloudShell Feedback

© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Step 6: After the creation of 'Task definition', click on 'Deploy' then click on 'Create service'

Tell us what you think

Task definition successfully created

tanmayvaj-taskdef:10 has been successfully created. You can use this task definition to deploy a service or run a task.

Deploy

Amazon Elastic Container Service > Task definitions > tanmayvaj-taskdef > Revision 10 > Containers

tanmayvaj-taskdef:10

Deploy

Create service

Update service

Run task

Create new revision

Overview [Info](#)

ARN	Status	Time created	App environment
arn:aws:ecs:ap-south-1:760444148665:task-definition/tanmayvaj-taskdef:10	ACTIVE	2024-03-05T07:43:45.260Z	FARGATE
Task role	Task execution role	Operating system/Architecture	Network mode
ec2TaskExecutionRole	ec2TaskExecutionRole	Linux/X86_64	awsvpc

Containers JSON Task placement Volumes (0) Requires attributes Tags

Task size

Task CPU	Task memory
1024 units (1 vCPU)	3072 MiB (3 GB)

Task CPU maximum allocation for containers

Task memory maximum allocation for container memory reservation

https://ap-south-1.console.aws.amazon.com/ecs/v2/task-definitions/tanmayvaj-taskdef/10/create-service?region=ap-south-1

© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Step 7: Select 'Launch type' in the 'Compute options', then set 'Launch type' to 'FARGATE'

Tell us what you think X

Amazon Elastic Container Service

Clusters
Namespaces
Task definitions
Account settings

Install AWS Copilot [↗](#)

Amazon ECR [↗](#)
Repositories

AWS Batch [↗](#)

Documentation [↗](#)
Discover products [↗](#)
Subscriptions [↗](#)

Amazon Elastic Container Service > Task definitions > tanmayvaj-taskdef > Revision 10 > Create service

Create [Info](#)

Environment AWS Fargate

Existing cluster
tanmayvaj-cluster [↻](#) [Create a new cluster](#) [↗](#)

▼ **Compute configuration (advanced)**

Compute options [Info](#)
To ensure task distribution across your compute types, use appropriate compute options.

☐ Capacity provider strategy
Specify a launch strategy to distribute your tasks across one or more capacity providers.

☒ **Launch type**
Launch tasks directly without the use of a capacity provider strategy.

Launch type [Info](#)
Select either managed capacity (Fargate), or custom capacity (EC2 or user-managed, External instances). External instances are registered to your cluster using the ECS Anywhere capability.

FARGATE ▼

Platform version [Info](#)
Specify the platform version on which to run your service.

LATEST ▼

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Step 8: Give a 'Service name' then click 'Create'

Tell us what you think X

Amazon Elastic Container Service

Clusters
Namespaces
Task definitions
Account settings

Install AWS Copilot [↗](#)

Amazon ECR [↗](#)
Repositories

AWS Batch [↗](#)

Documentation [↗](#)
Discover products [↗](#)
Subscriptions [↗](#)

Amazon Elastic Container Service > Task definitions > tanmayvaj-taskdef > Revision 10 > Create service

Deployment configuration

Application type [Info](#)
Specify what type of application you want to run.

☒ **Service**
Launch a group of tasks handling a long-running computing work that can be stopped and restarted. For example, a web application.

☐ Task
Launch a standalone task that runs and terminates. For example, a batch job.

Task definition
Select an existing task definition. To create a new task definition, go to Task definitions [↗](#).

☒ Specify the revision manually
Manually input the revision instead of choosing from the 100 most recent revisions for the selected task definition family.

Family: tanmayvaj-taskdef ▼ Revision: 10

Service name
Assign a unique name for this service.

tanmayvaj-service

Service type [Info](#)
Specify the service type that the service scheduler will follow.

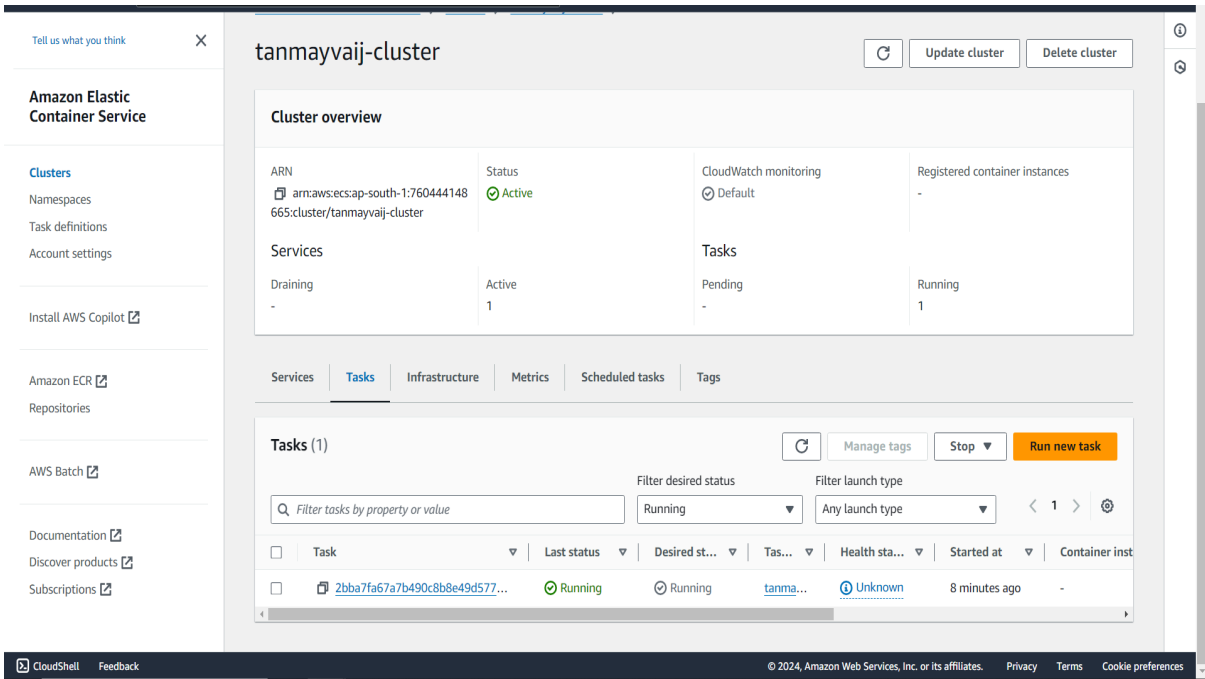
☒ **Replica**
Place and maintain a desired number of tasks across your cluster.

☐ Daemon
Place and maintain one copy of your task on each container instance.

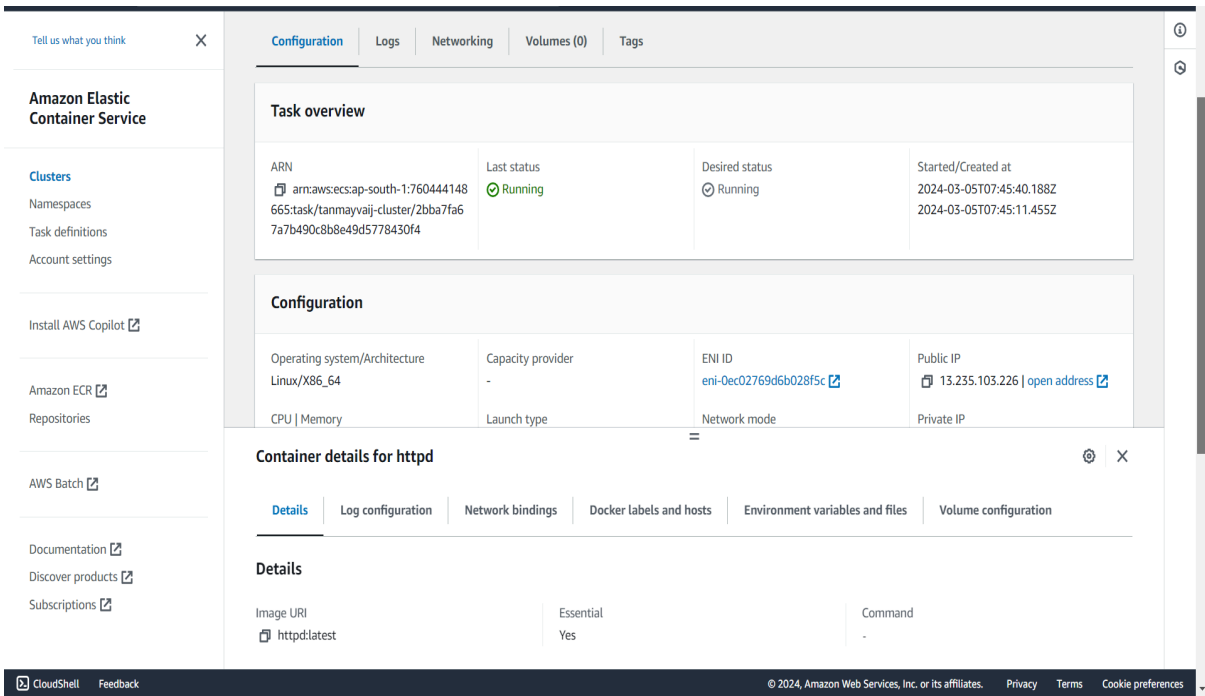
Desired tasks
Specify the number of tasks to launch.

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Step 9: Click on the created cluster then go to the ‘Tasks’ section, then click on the running task



Step 10: In the Configurations section copy and paste the public ip address in the browser



Step 11: 'It works!' should be shown on the browser web page



It works!
