

Advance AWS

AWS Project- 2 (Day -15)

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Teacher:

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Course:

Advance AWS Cloud Computing with DevOps
Fundamentals

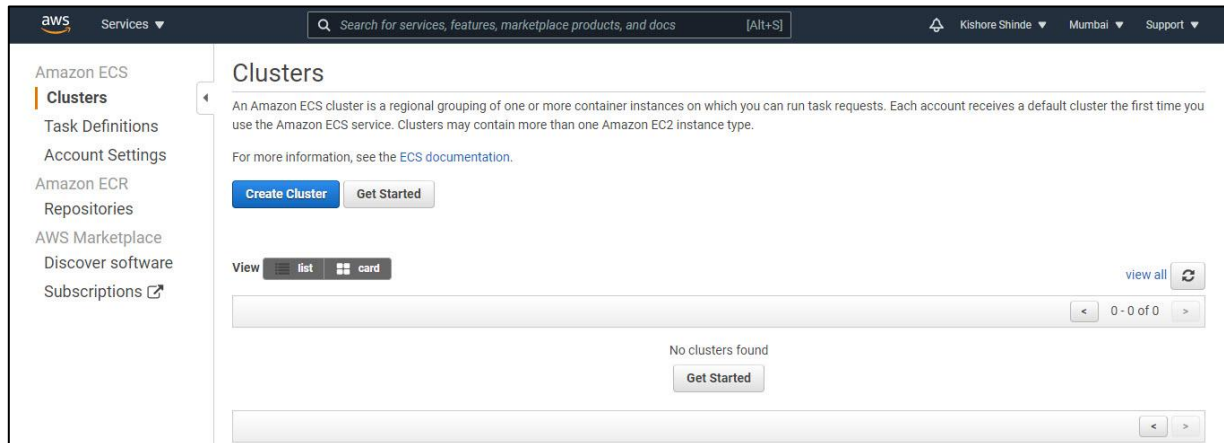
Institute:

Lets Upgrade

Project 2: Working with Elastic container service using Fargate

Step 1: Getting started with Amazon ECS using Fargate

SS1: ECS Console



Step 2: Creating container and task definition

SS2: 2nd panel with all options visible – Container and Task

Getting Started with Amazon Elastic Container Service (Amazon ECS) using Fargate

Step 1: Container and Task

- Step 2: Service
- Step 3: Cluster
- Step 4: Review

Diagram of ECS objects and how they relate

Container definition [Edit](#)

Choose an image for your container below to get started quickly or define the container image to use.

sample-app
image : httpd:2.4
memory : 0.5GB (512)
cpu : 0.25 vCPU (256)

nginx
image : nginx:latest
memory : 0.5GB (512)
cpu : 0.25 vCPU (256)

tomcat-webserver
image : tomcat
memory : 2GB (2048)
cpu : 1 vCPU (1024)

custom [Configure](#)
image : --
memory : --
cpu : --

Task definition [Edit](#)

A task definition is a blueprint for your application, and describes one or more containers through attributes. Some attributes are configured at the task level but the majority of attributes are configured per container.

Task definition name	first-run-task-definition	?
Network mode	awsvpc	?
Task execution role	Create new	?
Compatibilities	FARGATE	?
Task memory	0.5GB (512)	
Task CPU	0.25 vCPU (256)	

*Required [Cancel](#) [Next](#)

- **Container definition:**
 - **sample-app**
 - **image:** httpd:2.4
 - **Memory:** 0.5GB (512)
 - **CPU:** 0.25 vCPU (256)
- **Task definition:**
 - **Task definition name:** first-run-task-definition
 - **Network mode:** awsvpc
 - **Compatibilities:** FARGATE
 - **Task Memory:** 0.5GB (512)
 - **Task CPU:** 0.25 vCPU (256)

Step 3: Configuring the service

SS3: Next Panel – Service

aws Services ▾ Search for services, features, marketplace products, and docs [Alt+S] Kishore Shinde ▾ Mumbai ▾ Support ▾

Getting Started with Amazon Elastic Container Service (Amazon ECS) using Fargate

Step 1: Container and Task
Step 2: Service
Step 3: Cluster
Step 4: Review

Diagram of ECS objects and how they relate

The diagram illustrates the relationship between ECS components. A dashed box contains a solid box, which in turn contains a smaller solid box. Labels with arrows point to these boxes: 'Container definition' points to the innermost box, 'Task definition' points to the middle box, and 'Service' points to the outermost box. A label 'Cluster' points to the entire dashed box.

Define your service Edit

A service allows you to run and maintain a specified number (the "desired count") of simultaneous instances of a task definition in an ECS cluster.

Service name

Number of desired tasks

Security group
A security group is created to allow all public traffic to your service only on the container port specified. You can further configure security groups and network access outside of this wizard.

Load balancer type ☒ None ☐ Application Load Balancer

*Required Cancel Previous Next

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- Define your service
 - Service name: sample-app-service
 - Number of desired tasks: 1
 - Security group: Automatically create new
 - Load balancer type: None

Step 4: Configuring the cluster

SS4: Next Panel - Configure Cluster

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Getting Started with Amazon Elastic Container Service (Amazon ECS) using Fargate

Step 1: Container and Task
Step 2: Service
Step 3: Cluster
Step 4: Review

Diagram of ECS objects and how they relate

Configure your cluster

The infrastructure in a Fargate cluster is fully managed by AWS. Your containers run without you managing and configuring individual Amazon EC2 instances.

To see key differences between Fargate and standard ECS clusters, see the [Amazon ECS documentation](#).

Cluster name

Cluster names are unique per account per region. Up to 255 letters (uppercase and lowercase), numbers, and hyphens are allowed.

VPC ID Automatically create new ⓘ

Subnets Automatically create new ⓘ

*Required Cancel Previous **Next**

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- Configure Cluster
 - Cluster name: BlueCluster
 - VPC ID: Automatically create new
 - Subnets: Automatically create new

Step 5: Viewing the service

SS5: Dashboard displaying the cluster created

The screenshot shows the AWS ECS Clusters dashboard. The left sidebar lists navigation options: Amazon ECS, Clusters (selected), Task Definitions, Account Settings, Amazon ECR, Repositories, AWS Marketplace, Discover software, and Subscriptions. The main content area is titled 'Clusters' and includes a description of an Amazon ECS cluster. Below the description are 'Create Cluster' and 'Get Started' buttons. A 'View' toggle shows 'list' and 'card' views. A 'view all' link is present. The cluster 'BlueCluster' is highlighted with a red box. It is a FARGATE cluster with CloudWatch monitoring enabled. The dashboard shows 1 service, 1 running task, and 0 pending tasks. Below this, there are sections for EC2 resources (0 services, 0 running tasks, 0 pending tasks) and utilization metrics (No data for CPU, Memory, and Container instances).

- Cluster: BlueCluster
 - FARGATE
 - Services: 1 / Running Tasks: 1

SS6: Cluster information

The screenshot shows the 'Cluster : BlueCluster' page in the AWS ECS console. It includes buttons for 'Update Cluster' and 'Delete Cluster'. The page provides a detailed view of the cluster resources. Key information includes:

- Cluster ARN: `arn:aws:ecs:ap-south-1:391321345174:cluster/BlueCluster`
- Status: **ACTIVE**
- Registered container instances: 0
- Pending tasks count: 0 Fargate, 0 EC2
- Running tasks count: 1 Fargate, 0 EC2
- Active service count: 1 Fargate, 0 EC2
- Draining service count: 0 Fargate, 0 EC2

 Below this, there are tabs for 'Services', 'Tasks', 'ECS Instances', 'Metrics', 'Scheduled Tasks', 'Tags', and 'Capacity Providers'. The 'Services' tab is selected, showing a table with columns: Service Name, Status, Service type, Task Def..., Desired t..., Running t..., Launch ty..., and Platform... The table lists one service: 'sample-app-service' with status 'ACTIVE', service type 'REPLICA', task definition 'first-run-ta...', 1 desired task, 1 running task, launch type 'FARGATE', and platform 'LATEST(1...'.

- Cluster ARN: `arn:aws:ecs:ap-south-1:391321345174:cluster/BlueCluster`
- Status: Active
- Running task: 1 (first-run-task-definition)
- Running service: 1 (sample-app-service)

SS7: Panel displaying ENI ID

The screenshot shows the AWS Management Console interface for an Amazon ECS cluster named 'BlueCluster'. The task ID is '37b59f85b9254b0594f7e0e92eb790fb'. The task is in a 'RUNNING' state. The 'Network' section is expanded, showing the following details:

- Network mode: awsvpc
- ENI Id: **eni-0911232900edf02af** (highlighted with a red box)
- Subnet Id: subnet-0061490c4558d63c9
- Private IP: 10.0.1.194
- Public IP: 15.207.16.231
- Mac address: 0a:16:7e:c4:87:56

The 'Containers' section shows a single container named 'sample-app' with a status of 'RUNNING'.

- ENI Id: [eni-0911232900edf02af](#)

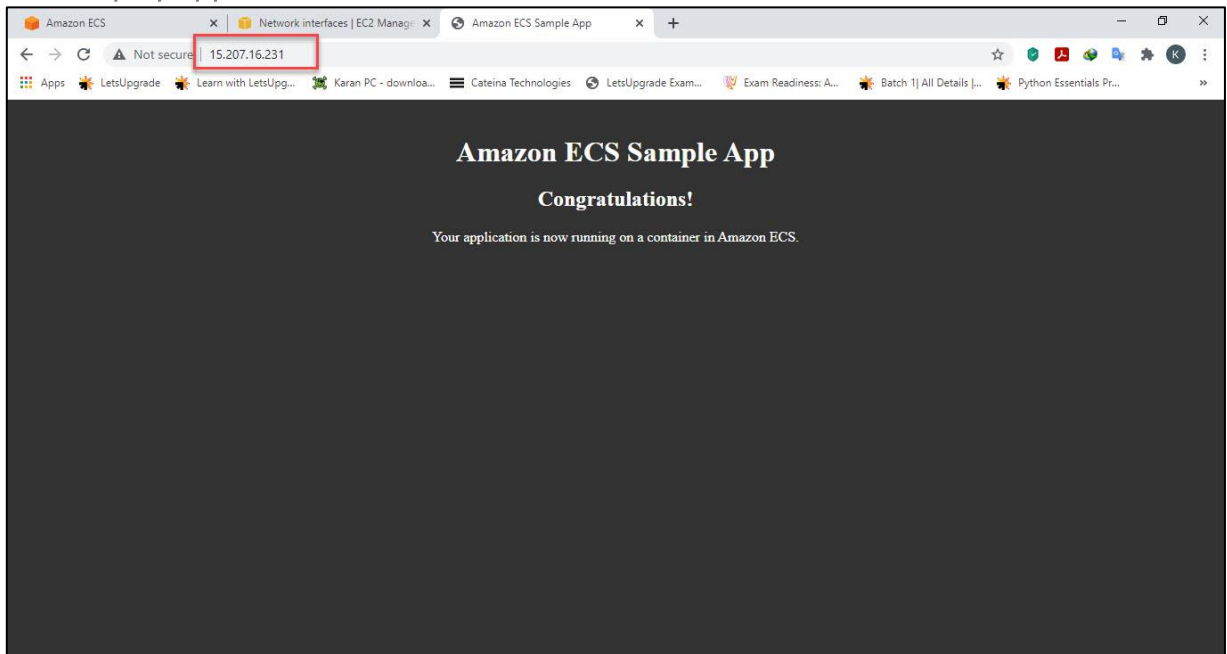
SS8: Panel displaying the private, public, and the macid

The screenshot shows the AWS Management Console interface for a network interface. The network interface ID is 'eni-0911232900edf02af'. The details are as follows:

- Private IPv4 address: **10.0.1.194** (highlighted with a red box)
- Public IPv4 address: **15.207.16.231** (highlighted with a blue box)
- MAC address: **0a:16:7e:c4:87:56** (highlighted with a red box)

Sr. No.	Private Ipv4 address	Public IPv4 address	Mac address
1	10.0.1.194	15.207.16.231	0a:16:7e:c4:87:56

SS9: Display application



- Public IPv4 address: 15.207.16.231

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