

Assignment Solution Day 15 & 16

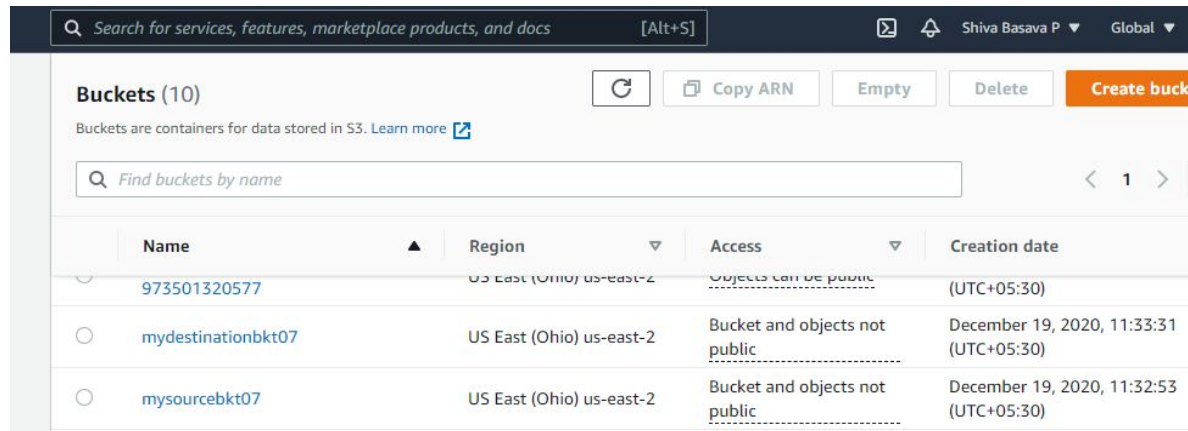
1. Question 1: Working with Lambda

Following are the steps and the screenshots for same,

a. Created two s3 buckets with the name

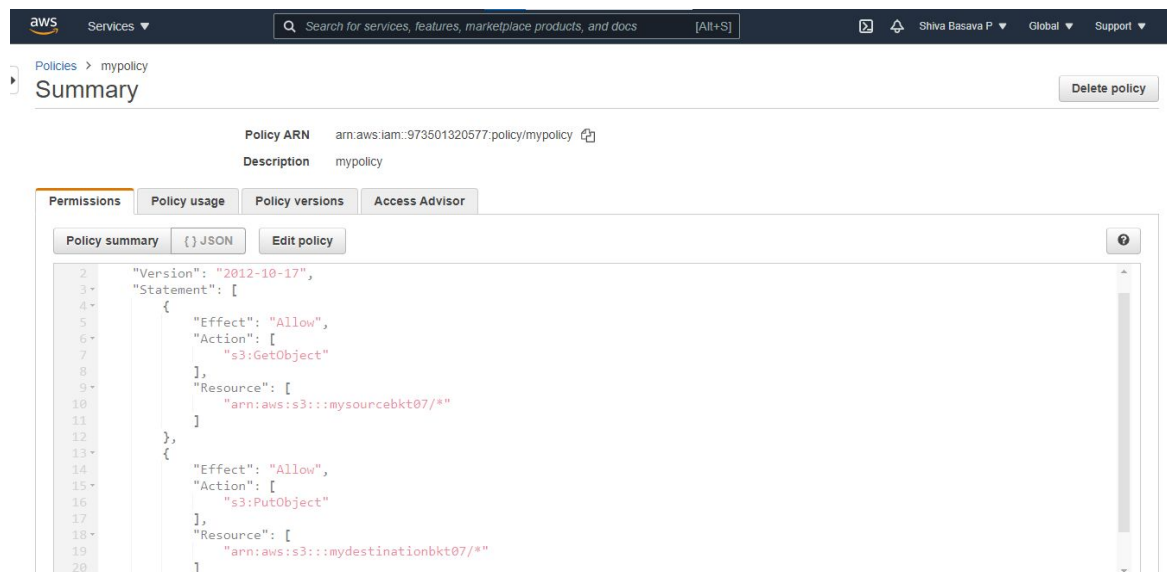
Source bucket - **mysourcebkt07**(**arn:aws:s3:::mysourcebkt07**)

Destination bucket - **mydestinationbkt07**(**arn:aws:s3:::mydestinationbkt07**)



b. Created a Policy with limited Read-Write permissions using a JSON script

(Json script in place)



(policy console with created policy - **mypolicy**)

The screenshot shows the AWS IAM console interface. At the top, there's a navigation bar with the AWS logo, 'Services' dropdown, a search bar, and user information 'Shiva Basava P'. Below the navigation bar, the breadcrumb 'Policies > mypolicy' is visible. The main heading is 'Summary' with a 'Delete policy' button. The policy details are as follows:

- Policy ARN:** arn:aws:iam::973501320577:policy/mypolicy
- Description:** mypolicy

Below the details, there are tabs for 'Permissions', 'Policy usage', 'Policy versions', and 'Access Advisor'. The 'Permissions' tab is selected, showing a 'Back S3' link and buttons for 'Policy summary', '{ } JSON', and 'Edit policy'. A search filter is present. The permissions are listed in a table:

Action (2 of 105) Show remaining 103	Resource	Request condition
Read (1 of 42 actions)		
GetObject	BucketName string like mysourcebkt07, ObjectPath string like All	None
Write (1 of 35 actions)		
PutObject	BucketName string like mydestinationbkt07, ObjectPath string like All	None

c. Created a role and attached the policy that was created in the previous step.
(Role console showing details of the role)

The screenshot shows the AWS IAM console interface for a role named 'Myrole'. The breadcrumb is 'Roles > Myrole'. The main heading is 'Summary' with a 'Delete role' button. The role details are as follows:

- Role ARN:** arn:aws:iam::973501320577:role/Myrole
- Role description:** Allows Lambda functions to call AWS services on your behalf. | Edit
- Instance Profile ARNs:** /
- Path:** /
- Creation time:** 2020-12-19 11:50 UTC+0530
- Last activity:** 2020-12-19 12:18 UTC+0530 (6 days ago)
- Maximum session duration:** 1 hour Edit

Below the details, there are tabs for 'Permissions', 'Trust relationships', 'Tags (1)', 'Access Advisor', and 'Revoke sessions'. The 'Permissions' tab is selected, showing 'Permissions policies (1 policy applied)'. There is an 'Attach policies' button and an 'Add inline policy' link. A table lists the attached policies:

Policy name	Policy type
mypolicy	Managed policy

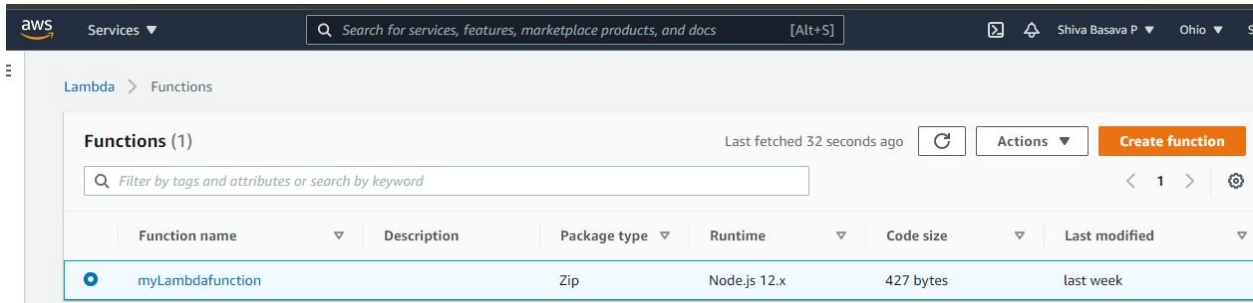
The screenshot shows the AWS IAM console interface for the 'mypolicy' under the 'Policy usage' tab. The breadcrumb is 'Policies > mypolicy'. The main heading is 'Summary' with a 'Delete policy' button. The policy details are as follows:

- Policy ARN:** arn:aws:iam::973501320577:policy/mypolicy
- Description:** mypolicy

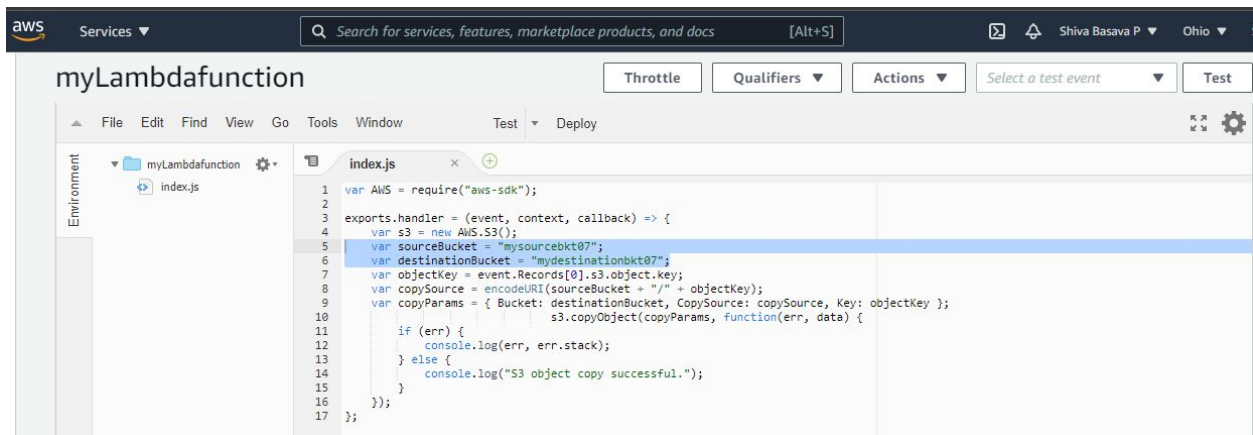
Below the details, there are tabs for 'Permissions', 'Policy usage', 'Policy versions', and 'Access Advisor'. The 'Policy usage' tab is selected, showing 'Permissions (1)'. A link 'Attach this policy to an IAM entity to apply its permissions to the entity. Learn more' is present. There are 'Attach' and 'Detach' buttons. A search filter is present. A table shows the policy is attached to a role:

Name	Type
Myrole	Role

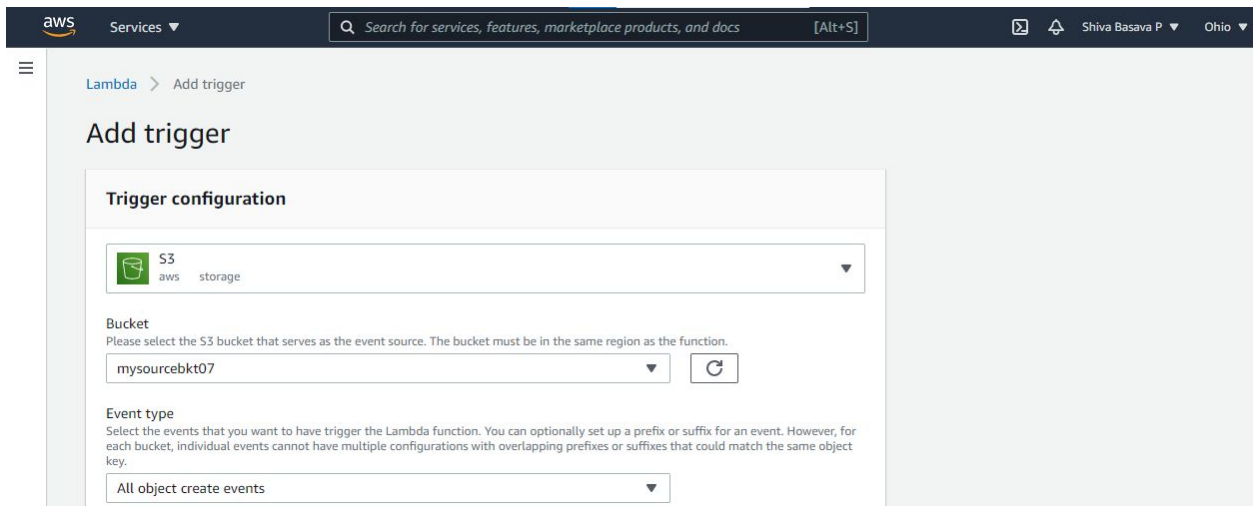
d. Created a Lambda function - myLambdafunction
(lambda functions dashboard)



(js file edited, **index.js**)



(Adding trigger-s3, bucket name - **mysourcebkt07**, confirmation for having separate buckets)



e. Displaying the added triggers to the lambda function
(lambda configuration page with trigger added)

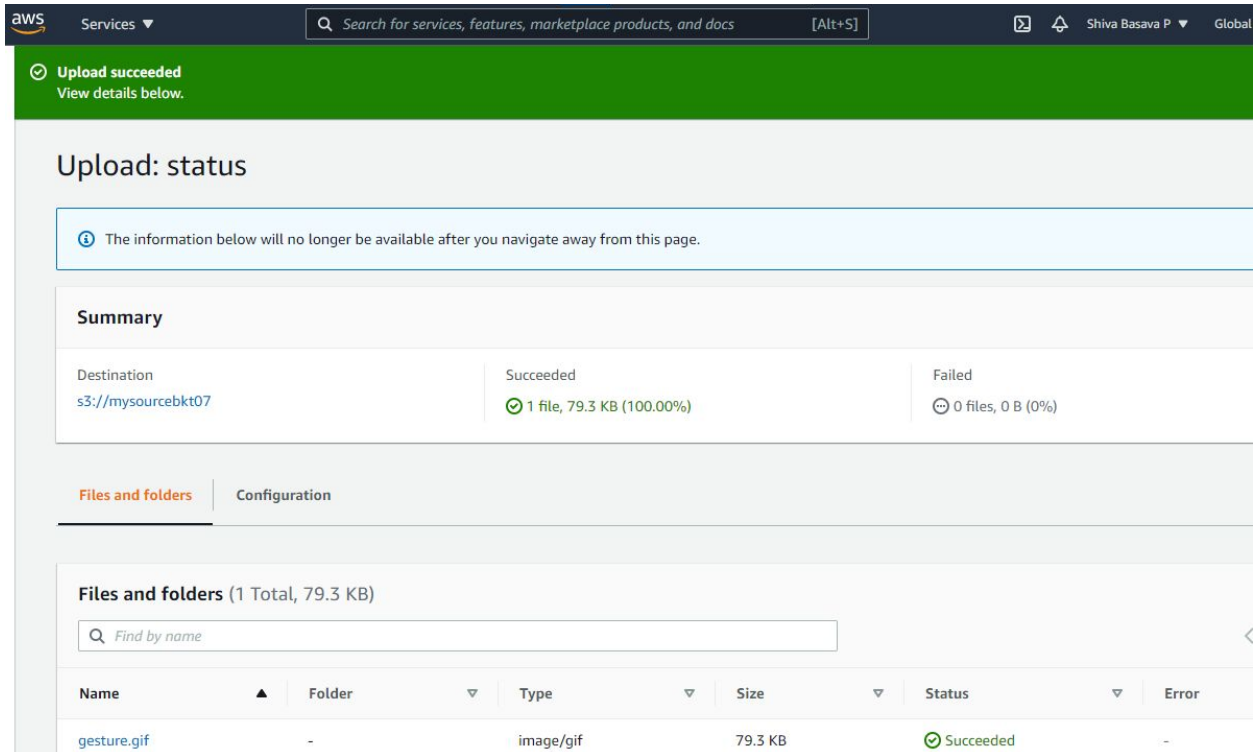
The screenshot shows the AWS Lambda console for a function named **myLambdafunction**. The **Layers** section displays an S3 trigger. Below it, the **Triggers** section shows a single trigger for **S3: mysourcebkt07 (Enabled)**. The trigger details include the ARN `arn:aws:s3:::mysourcebkt07`, event type **ObjectCreated**, and notification name `09930517-c500-4d1f-8ce2-66747d5937a9`. A message indicates that the console no longer supports disabling S3 and CloudWatch Logs triggers.

f. Tested by uploading objects into the source bucket
(object uploaded in the source bucket - **mysourcebkt07**)

The screenshot shows the AWS S3 console for the bucket **mysourcebkt07**. The **Upload** page displays a table of files and folders. One file, **gesture.gif**, is listed with a size of 79.3 KB. The destination is set to `s3://mysourcebkt07`.

Name	Folder	Type	Size
gesture.gif	-	image/gif	79.3 KB

(uploaded the file to **mysourcebkt07**)



Upload: status

The information below will no longer be available after you navigate away from this page.

Summary

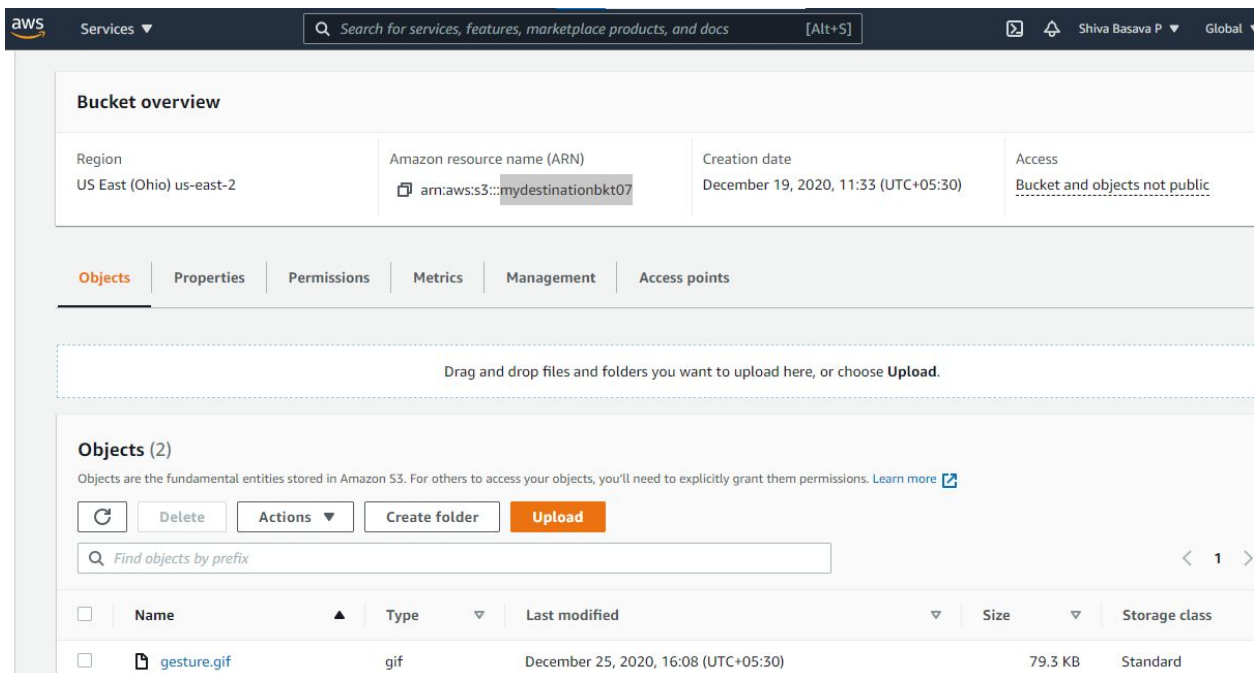
Destination s3://mysourcebkt07	Succeeded 1 file, 79.3 KB (100.00%)	Failed 0 files, 0 B (0%)
-----------------------------------	--	-----------------------------

Files and folders (1 Total, 79.3 KB)

Find by name

Name	Folder	Type	Size	Status	Error
gesture.gif	-	image/gif	79.3 KB	Succeeded	-

(object replicated in the destination bucket - **mydestinationbkt07**)



Bucket overview

Region US East (Ohio) us-east-2	Amazon resource name (ARN) arn:aws:s3::mydestinationbkt07	Creation date December 19, 2020, 11:33 (UTC+05:30)	Access Bucket and objects not public
------------------------------------	--	---	---

Objects | Properties | Permissions | Metrics | Management | Access points

Drag and drop files and folders you want to upload here, or choose **Upload**.

Objects (2)

Objects are the fundamental entities stored in Amazon S3. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Refresh Delete Actions Create folder Upload

Find objects by prefix

	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	gesture.gif	gif	December 25, 2020, 16:08 (UTC+05:30)	79.3 KB	Standard

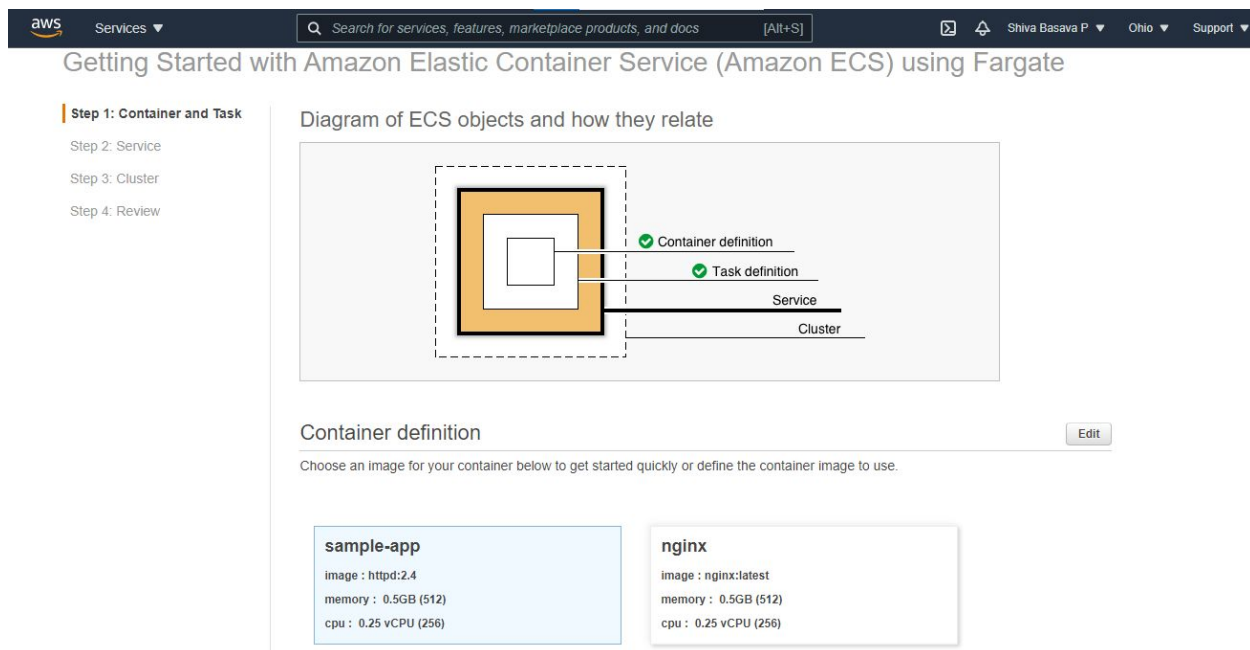
2. Question 2: Working with Elastic container service using fargate

Following are the steps and screenshots for the same,

a. Getting started with amazon ECS using fargate Elastic container service console



b. Creating container and task definition Displaying panel with all options visible



memory : 0.5GB (512)
cpu : 0.25 vCPU (256)

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

c. Configuring the service

Step 4: Review

Container definition
Task definition
Service
Cluster

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 sample-app-service

Number of desired tasks 1

Security group Automatically create new
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

d. Configuring the cluster, **cluster name - default**

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Step 3: Cluster
Step 4: Review

Container definition
Task definition
Service
Cluster

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.

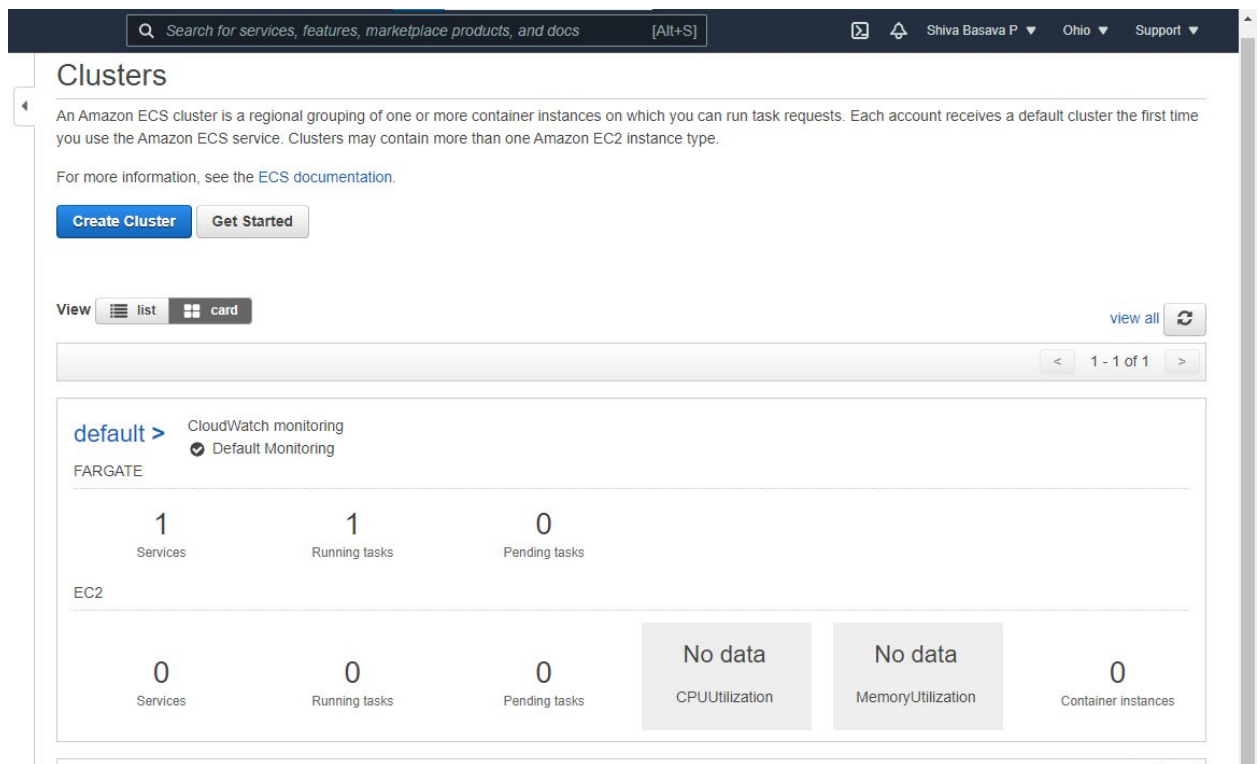
VPC ID Automatically create new ⓘ

Subnets Automatically create new ⓘ

*Required Cancel Previous Next

e. Viewing the service

Dashboard displaying the cluster created with cluster name - **default**



Cluster information
(Overview of Service- **sample-app-service**)

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Clusters > default

Cluster : default

Update Cluster Delete Cluster

Get a detailed view of the resources on your cluster.

Cluster ARN: `arn:aws:ecs:us-east-2:973501320577:cluster/default`

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

Services Tasks ECS Instances Metrics Scheduled Tasks Tags Capacity Providers

Create Update Delete Actions

Last updated on December 25, 2020 3:16:56 PM (1m ago)

Filter in this page Launch type: ALL Service type: ALL < 1-1 >

	Service Name	Status	Service ty...	Task Definition	Desir...	Runn...	Launch type	Platform versio...
<input type="checkbox"/>	sample-app-service	ACTIVE	REPLICA	first-run-task-defini...	1	1	FARGATE	LATEST(1.3.0)

(Overview of Task- Task)

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Clusters > default

Cluster : default

Update Cluster Delete Cluster

Get a detailed view of the resources on your cluster.

Cluster ARN: `arn:aws:ecs:us-east-2:973501320577:cluster/default`

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

Services Tasks ECS Instances Metrics Scheduled Tasks Tags Capacity Providers

Run new Task Stop Stop All Actions

Last updated on December 25, 2020 3:18:43 PM (0m ago)

Desired task status: **Running** Stopped

Filter in this page Launch type: ALL < 1-1 > Page size: 50

	Task	Task d...	Contai...	Last st...	Desire...	Started...	Started...	Group ...	Launc...	Platfor...
<input type="checkbox"/>	0ab3fc6b31f04e42a4f233ffc65fc427	first-run...	--	RUNNI...	RUNNI...	2020-1...	ecs-svc...	service:...	FARGA...	1.3.0

(Service details)

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Amazon ECS Clusters Task Definitions Account Settings Amazon EKS Clusters Amazon ECR Repositories AWS Marketplace Discover software Subscriptions

Clusters > default > Service: sample-app-service

Service : sample-app-service

[Update](#) [Delete](#)

Cluster: default Desired count: 1
 Status: ACTIVE Pending count: 1
 Task definition: first-run-task-definition:2 Running count: 0
 Service type: REPLICAS
 Launch type: FARGATE
 Service role: AWSServiceRoleForECS
 Created By: am:aws:iam::973501320577:root

Details Tasks Events Auto Scaling Deployments Metrics Tags Logs

Load Balancing

Load Balancer Name	Container Name	Container Port
No load balancers		

Network Access

Allowed VPC: vpc-07cf00e562e0bef75
 Allowed subnets: subnet-0dbdcac6b77fa0101, subnet-05fcbf39e76aa43da
 Security groups*: sg-083a2694985605781
 Auto-assign public IP: ENABLED

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Clusters > default > Service: sample-app-service

Service : sample-app-service

[Update](#) [Delete](#)

Cluster: default Desired count: 1
 Status: ACTIVE Pending count: 0
 Task definition: first-run-task-definition:2 Running count: 1
 Service type: REPLICAS
 Launch type: FARGATE
 Service role: AWSServiceRoleForECS
 Created By: am:aws:iam::973501320577:root

Details Tasks Events Auto Scaling Deployments Metrics Tags Logs

Last updated on December 25, 2020 3:06:49 PM (0m ago) [Refresh](#) [Help](#)

Task status: **Running** Stopped

Filter in this page < 1-1 > Page size 50

Task	Task Definition	Last status	Desired status	Group	Launch type	Platform version ...
0ab3fc6b31f04e42...	first-run-task-definit...	RUNNING	RUNNING	service:sample-ap...	FARGATE	1.3.0

(Task details)

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Clusters > default > Task: 0ab3fc6b31f04e42a4f233ffc65fc427

Task : 0ab3fc6b31f04e42a4f233ffc65fc427

Run more like this Stop

Details Tags Logs

Cluster [default](#)

Launch type FARGATE

Platform version 1.3.0

Task definition [first-run-task-definition:2](#)

Group service:sample-app-service

Task role None

Last status **RUNNING**

Desired status RUNNING

Created at 2020-12-25 15:04:19 +0530

Started at 2020-12-25 15:04:44 +0530

Network

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Created at 2020-12-25 15:04:19 +0530

Started at 2020-12-25 15:04:44 +0530

Network

Network mode awsvpc

ENI Id [eni-0beab52c9634b76a0](#)

Subnet Id [subnet-0dbdcac6b77fa0101](#)

Private IP 10.0.1.222

Public IP 3.140.200.206

Mac address 06:44:c9:ab:be:7a

Containers

Last updated on December 25, 2020 3:19:51 PM (1m ago) ↺ ⓘ

Name	Container Runtime I...	Status	Image	Imag...	CPU ...	Hard/Soft ...	Essential ...	Resource ...
▶ sample-app	66469142e28d5e33f4...	RUNNING	httpd:2.4		256	--/512	true	088aee78-...

Panel displaying ENI ID and other information

Network Interface: eni-0beab52c9634b76a0

Property	Value
Network interface ID	eni-0beab52c9634b76a0
VPC ID	vpc-07cf00e562e0bef75
MAC address	06:44:c9:ab:be:7a
Subnet ID	subnet-0dbdcac6b77fa0101
Availability Zone	us-east-2b
Description	arn:aws:ecs:us-east-2:973501320577:attachment/1ed15e19-2e74-41ce-aabf-e760f00e2439
Security groups	EC2ContainerService-default-EcsSecurityGroup-C43CLC8DUZ56. view inbound rules . view outbound rules
Status	In-use
Private DNS (IPv4)	ip-10-0-1-222.us-east-2.compute.internal
Secondary private IPv4 IPs	-
Elastic Fabric Adapter	Disabled
Attachment ID	eni-attach-0d7a1d29570ca1b01
Attachment owner	108122880427
Network interface owner	973501320577
Primary private IPv4 IP	10.0.1.222
IPv4 Public IP	3.140.200.206*
IPv6 IPs	-
Source/dest. check	true
Instance ID	-
Device index	1

Displaying application after accessing the same with its **public-ip** at browser

Not secure | 3.140.200.206

Amazon ECS Sample App

Congratulations!

Your application is now running on a container in Amazon ECS.