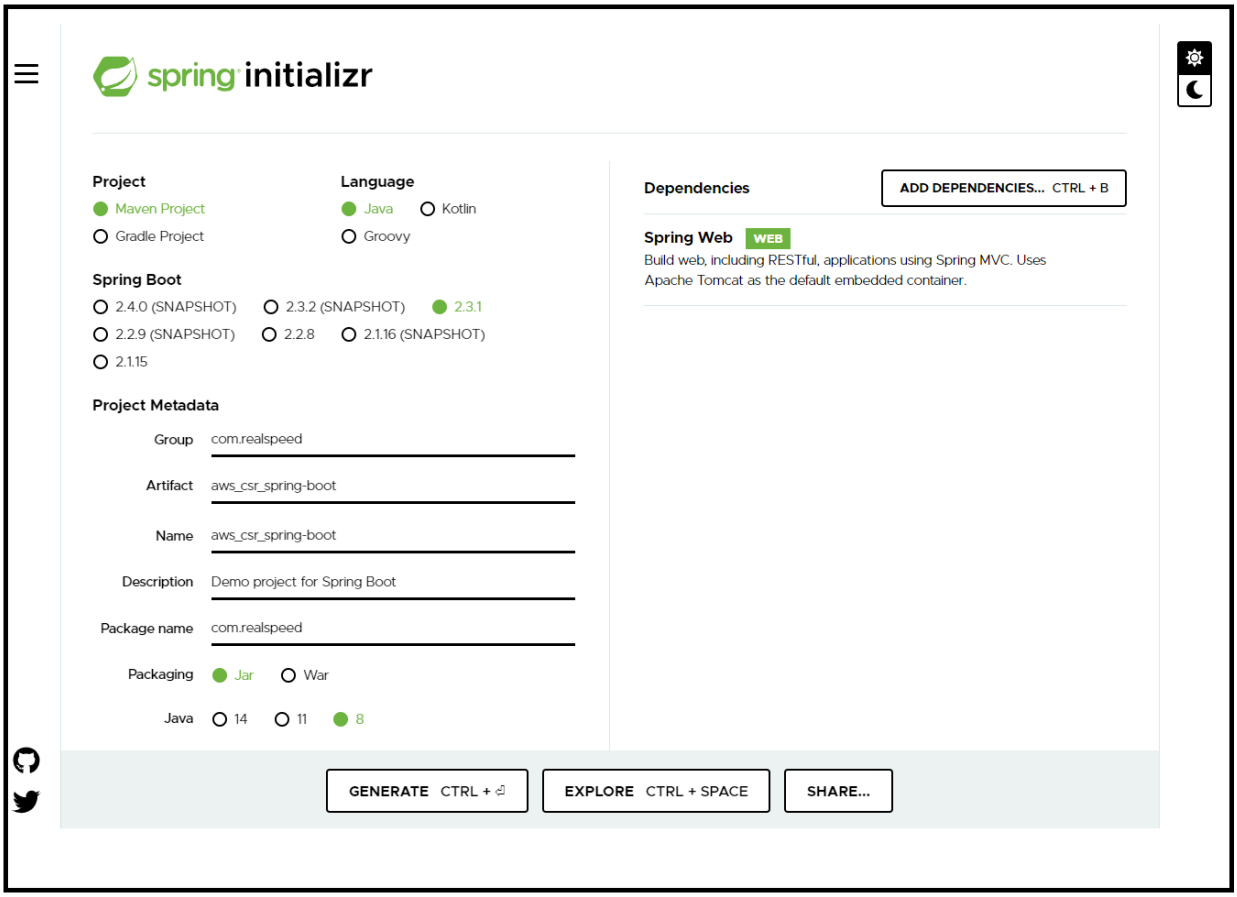


TestConroller.java

```java
package com.realspeed.controller;

import org.springframework.http.HttpStatus;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.ResponseStatus;
import org.springframework.web.bind.annotation.RestController;

@RestController
public class TestConroller {

    @GetMapping
    @ResponseStatus(HttpStatus.OK)
    public String test() { return "Hello DJ"; }
}

```

1. **mvn clean install**
2. **Start the docker container**
3. **docker build -f Dockerfile -t aws-csr_spring-boot .**
4. **docker images**
5. **docker run -p 8080:8080 aws-csr_spring-boot**

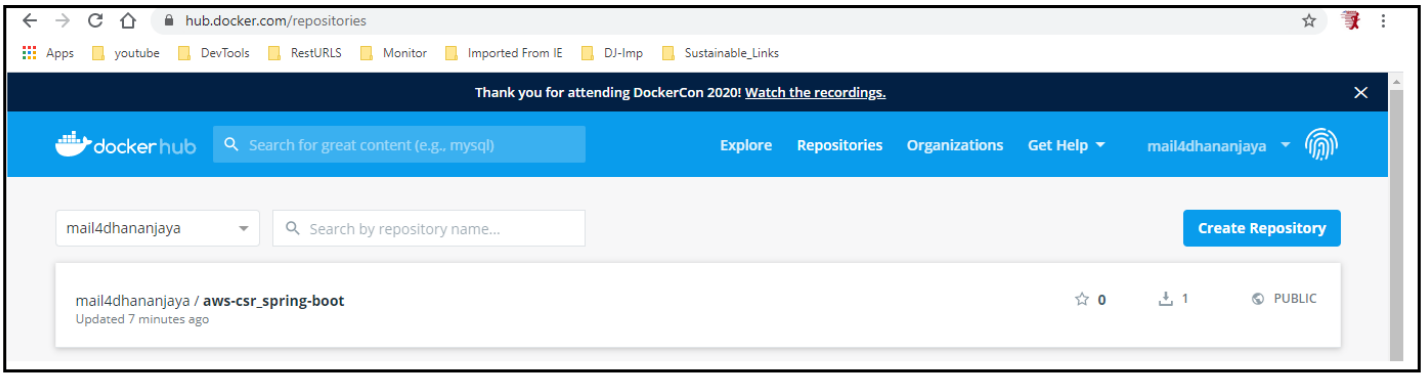
<u>Run below commands for docker hub</u>

docker tag aws-csr_spring-boot:latest mail4dhananjaya/aws-csr_spring-boot:latest

docker push mail4dhananjaya/aws-csr_spring-boot:latest

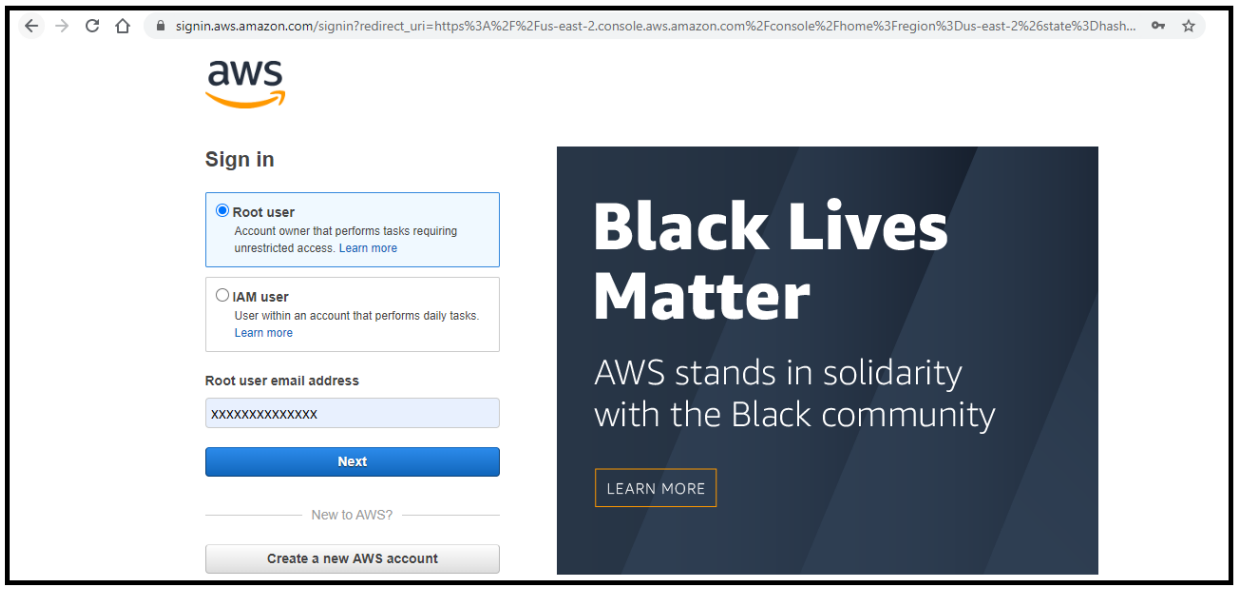
```
E:\Project\Java_Projects\aws_csr_spring-boot\aws_csr_spring-boot>docker push mail4dhananjaya/aws-csr_spring-boot:latest
The push refers to repository [docker.io/mail4dhananjaya/aws-csr_spring-boot]
668a9a23fd92: Pushed
35c20f26d188: Pushed
c3fe59dd9556: Pushed
6ed1a81ba5b6: Pushed
a3483ce177ce: Pushed
ce6c8756685b: Pushed
30339f20ced0: Pushed
0eb22bfb707d: Pushed
a2ae92ffcd29: Pushed
latest: digest: sha256:b0e30808a3e72cefca5713a42b18522d3e338d5033386911f8673c2eda758f1d size: 2212

E:\Project\Java_Projects\aws_csr_spring-boot\aws_csr_spring-boot>
```

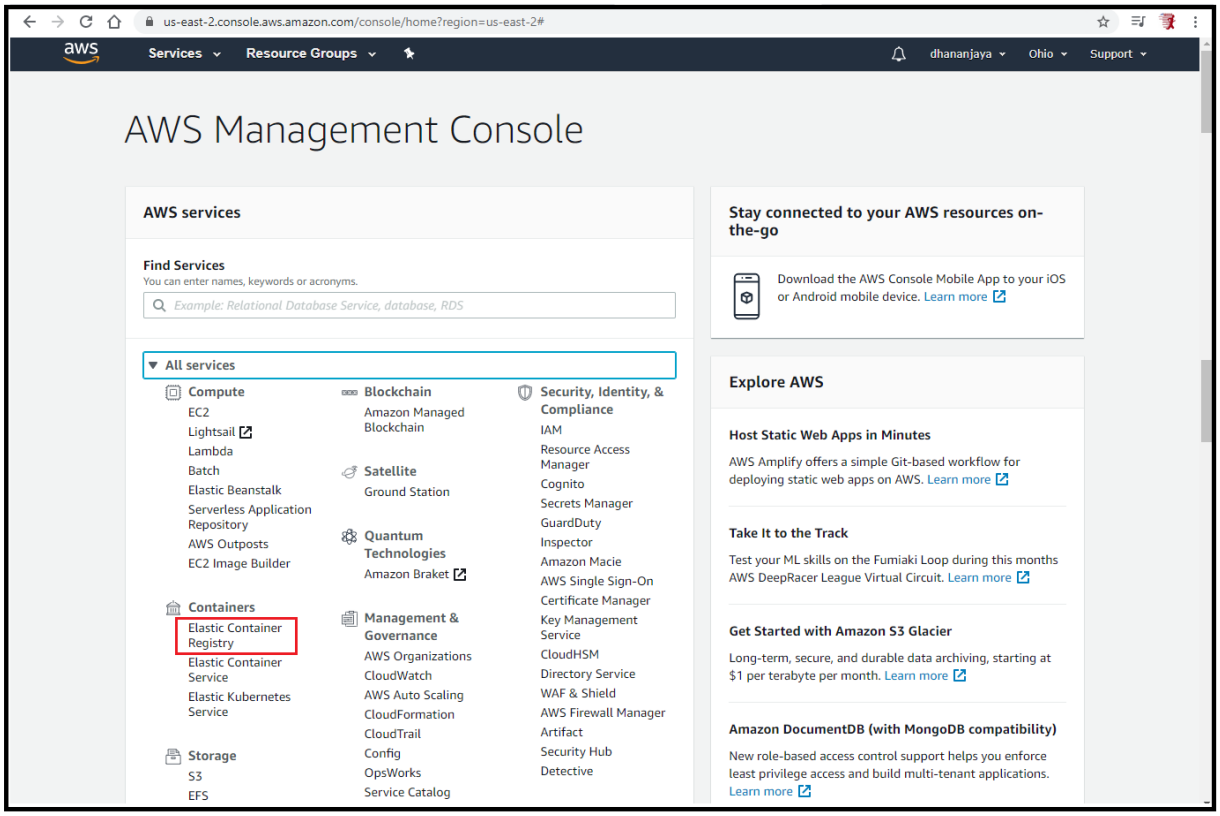


How to push image to Amazon ECR [Elastic Container Registry]

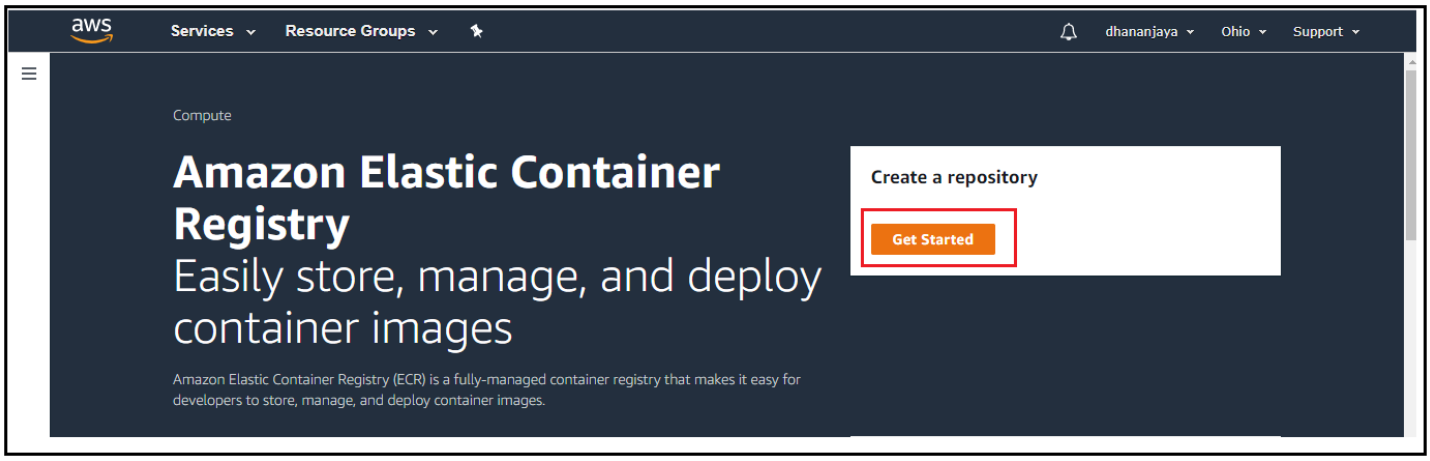
Login to AWS [https://console.aws.amazon.com/console/home]

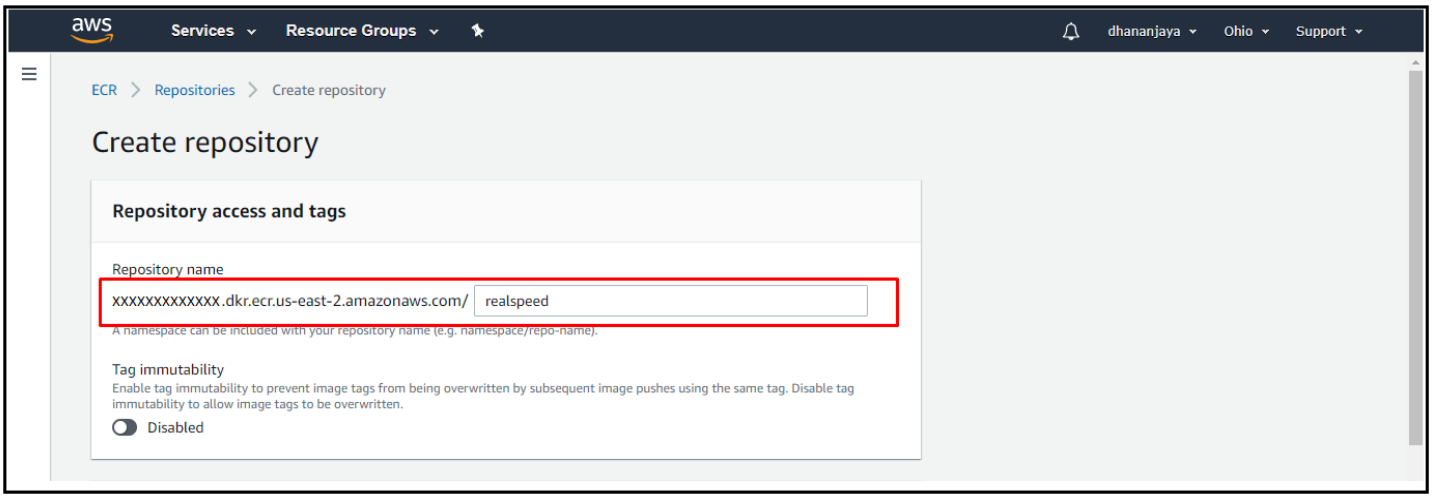


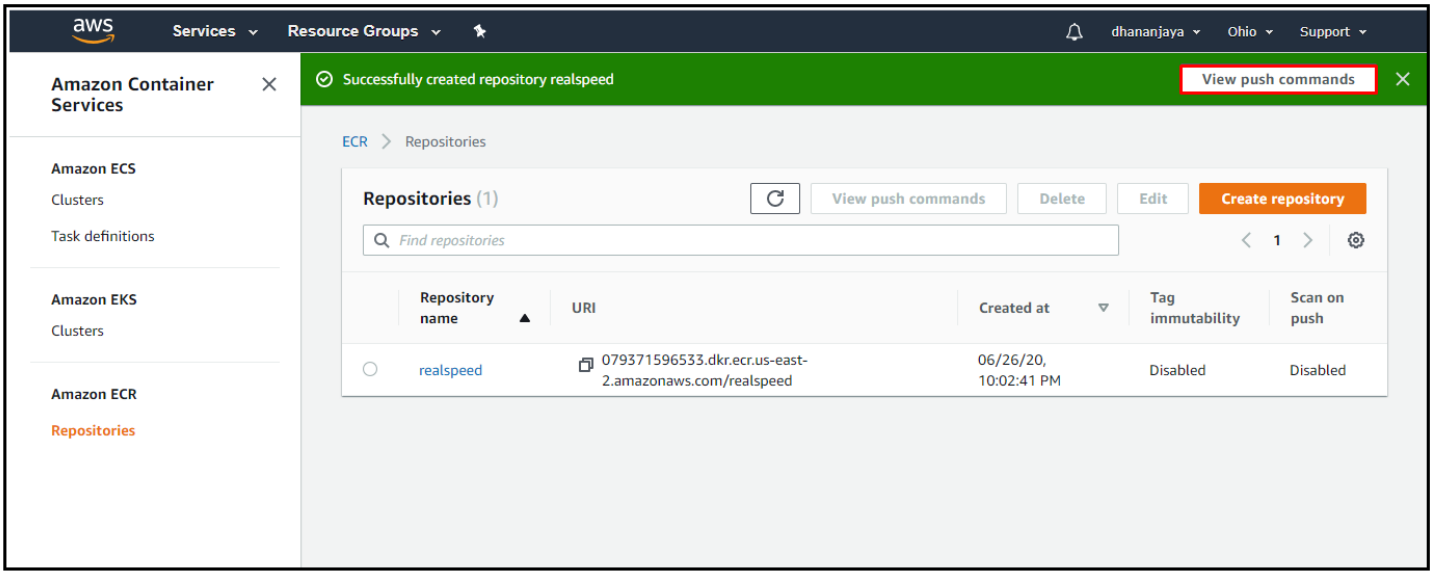
Select **Elastic Container Registry [ECR]**



Create a repository



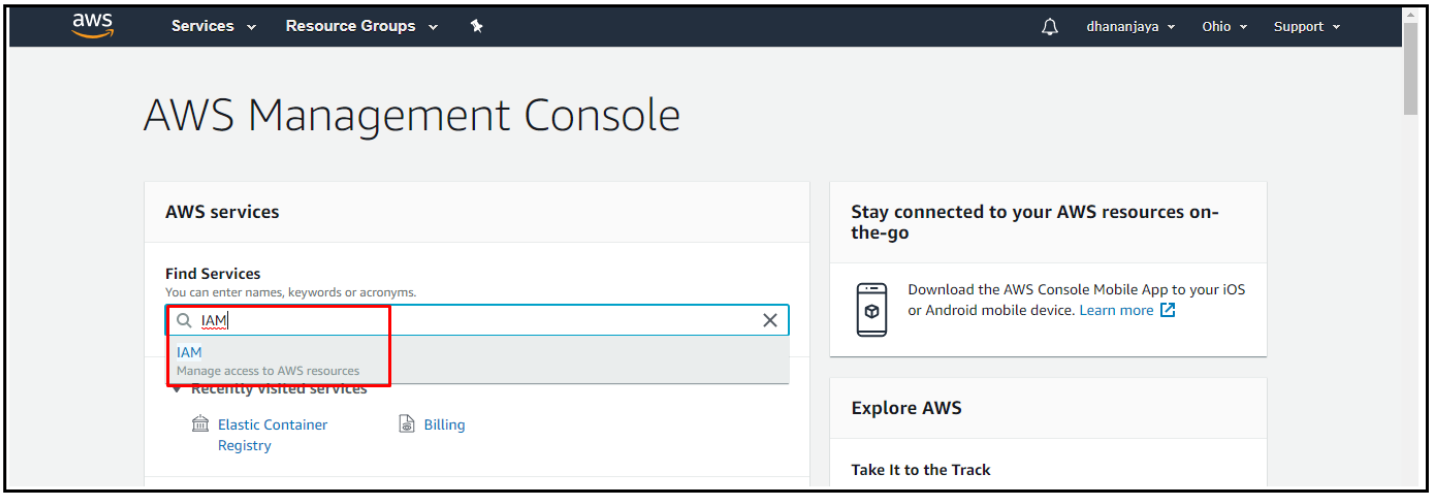


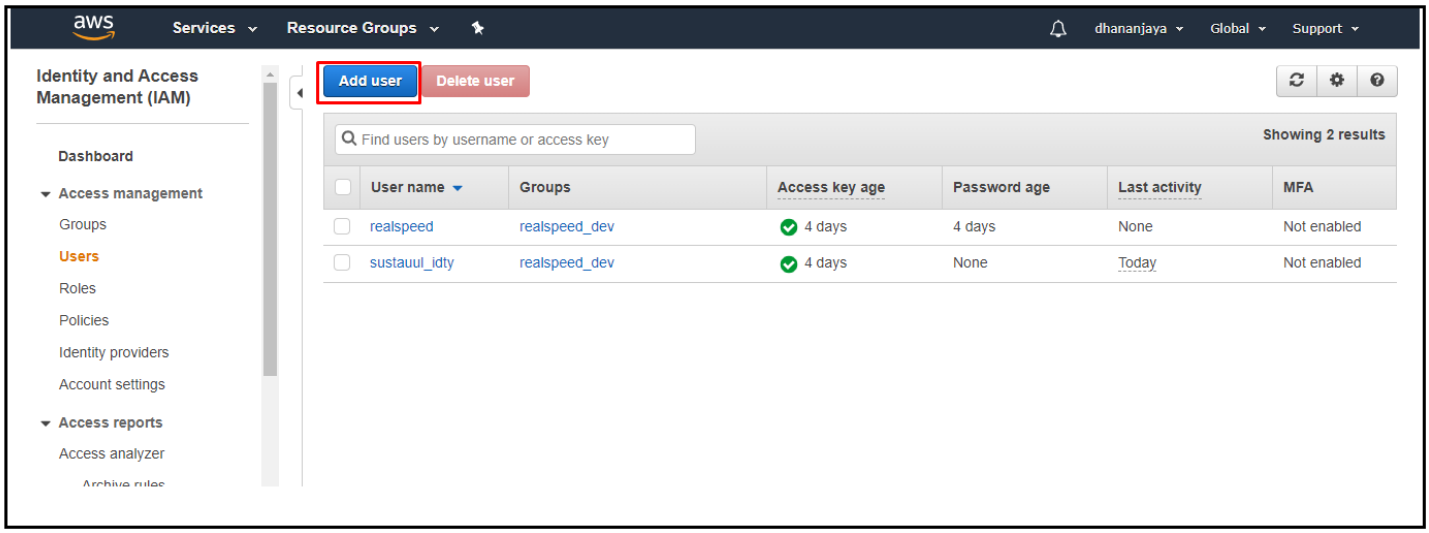


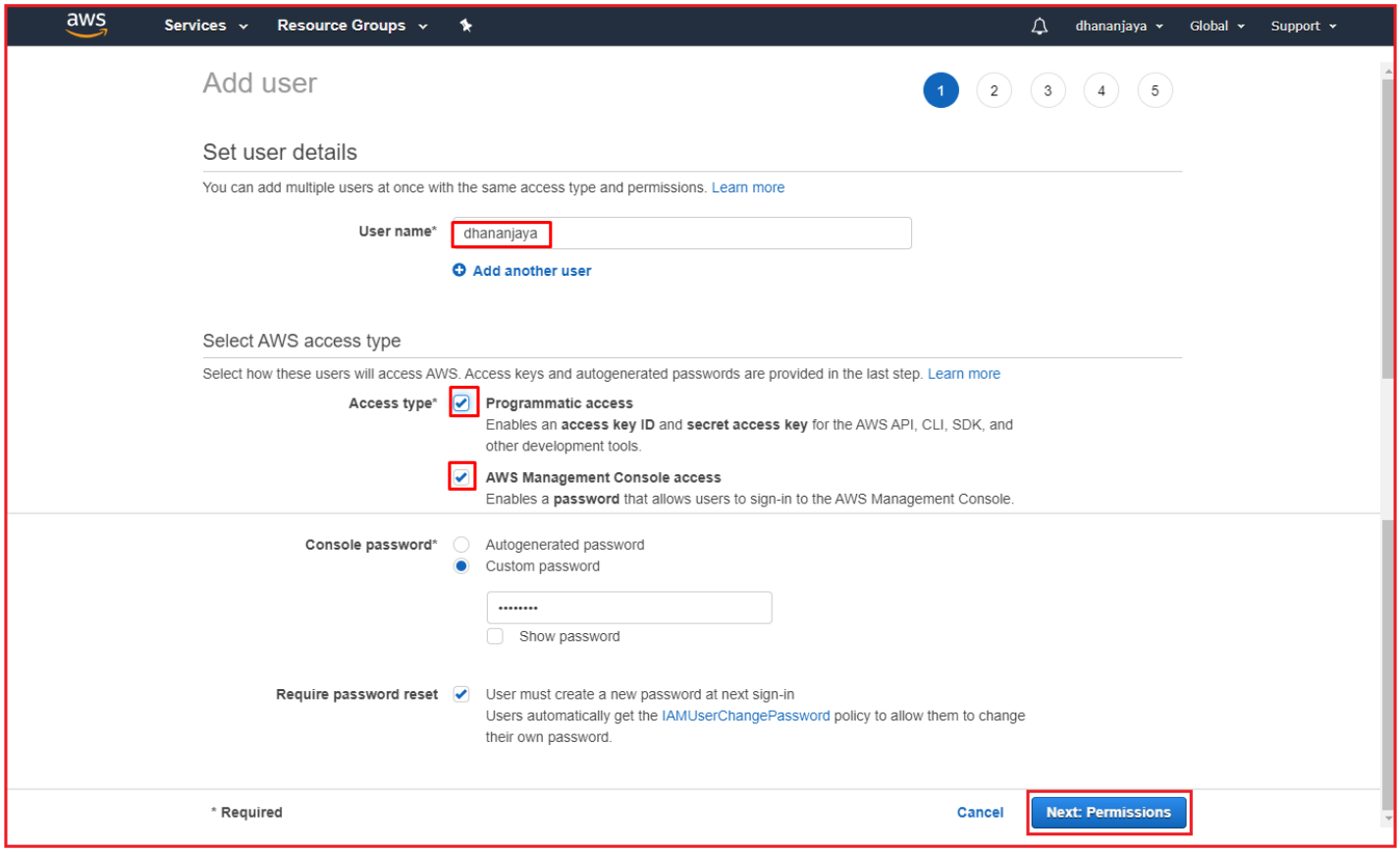
Run below commands for aws repository, But to run below command create IAM user

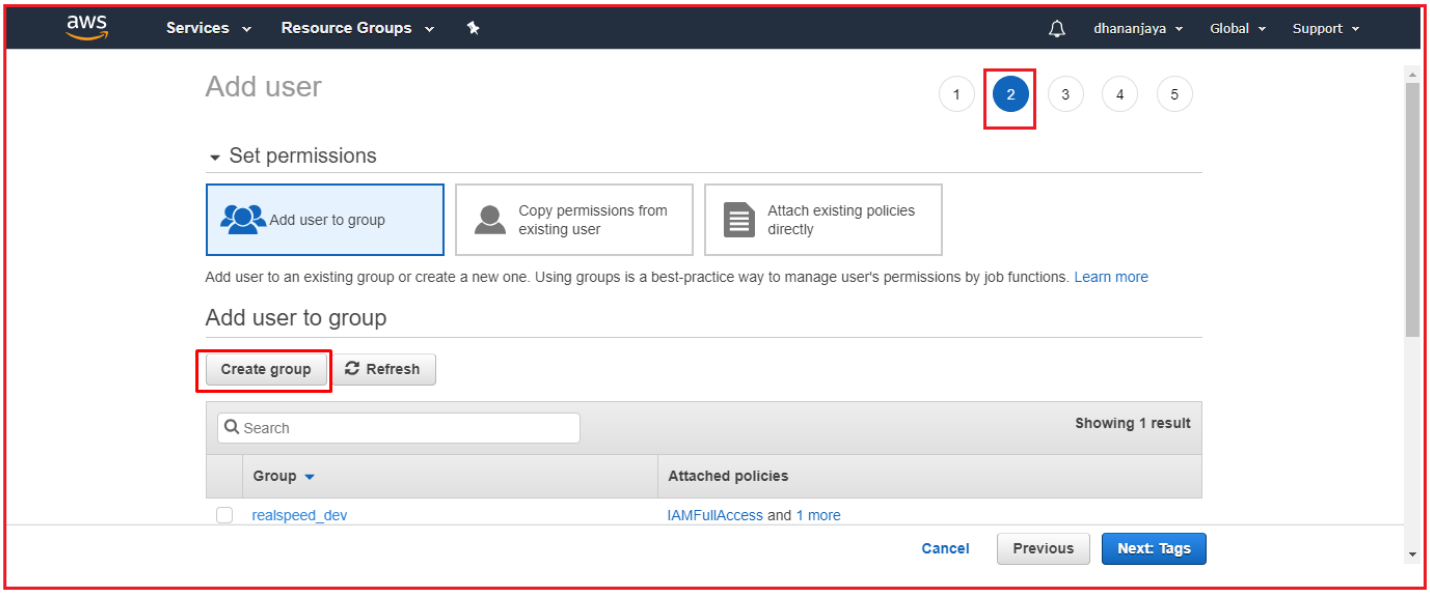
1. aws ecr get-login-password --region us-east-2 | docker login --username AWS --password-stdin 079371596533.dkr.ecr.us-east-2.amazonaws.com
2. docker tag realspeed:latest 079371596533.dkr.ecr.us-east-2.amazonaws.com/realspeed:latest
3. docker push 079371596533.dkr.ecr.us-east-2.amazonaws.com/realspeed:latest

How to create IAM user in AWS

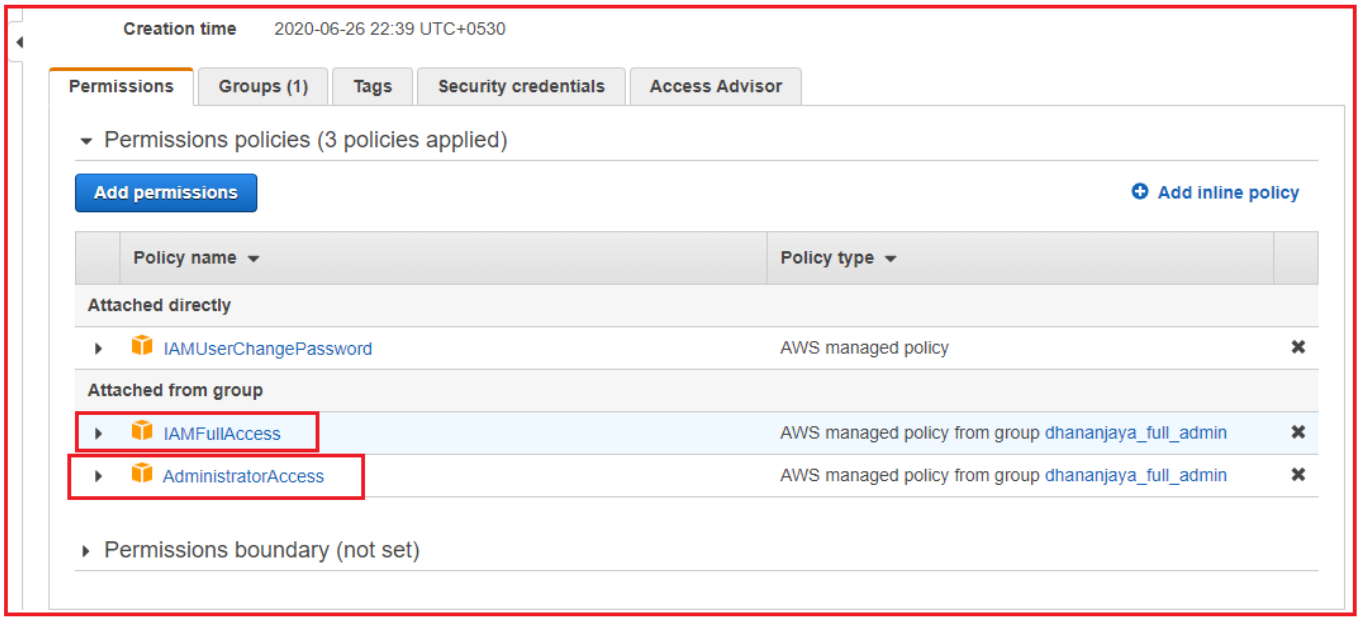


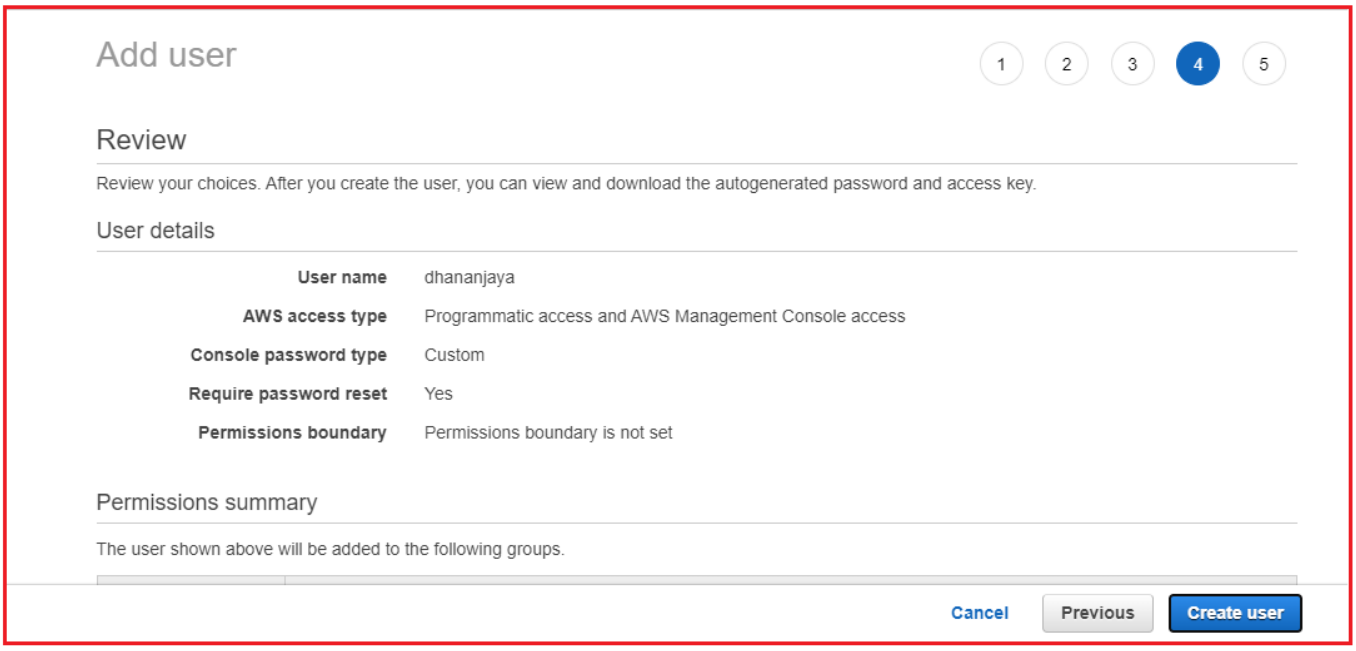


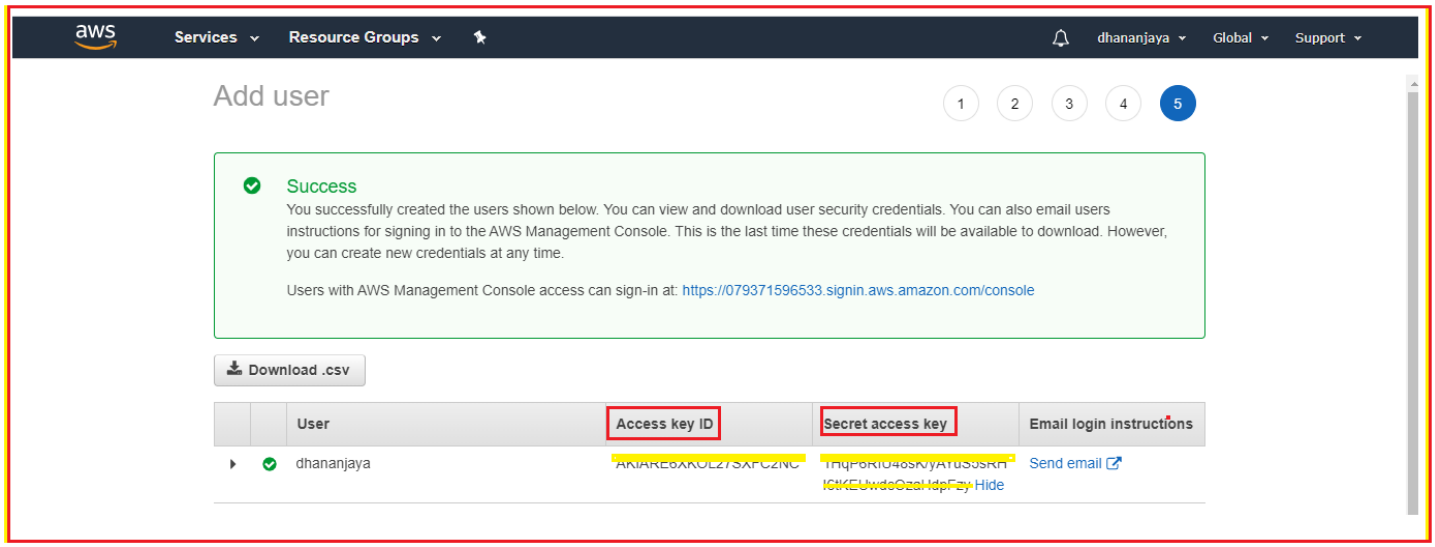

aws
Services
Resource Groups
dhananjaya
Global
Support
Add user
1 2 3 4 5
Set user details
You can add multiple users at once with the same access type and permissions. Learn more
User name*
dhananjaya
Add another user
Select AWS access type
Select how these users will access AWS. Access keys and autogenerated passwords are provided in the last step. Learn more
Access type*
Programmatic access
Enables an access key ID and secret access key for the AWS API, CLI, SDK, and other development tools.
AWS Management Console access
Enables a password that allows users to sign-in to the AWS Management Console.
Console password*
Autogenerated password
Custom password
Show password
Require password reset
User must create a new password at next sign-in
Users automatically get the IAMUserChangePassword policy to allow them to change their own password.
* Required
Cancel
Next: Permissions


aws
Services
Resource Groups
dhananjaya
Global
Support
Add user
1 2 3 4 5
Set permissions
Add user to group
Copy permissions from existing user
Attach existing policies directly
Add user to an existing group or create a new one. Using groups is a best-practice way to manage user's permissions by job functions. Learn more
Add user to group
Create group
Refresh
Search
Showing 1 result
Group
Attached policies
realspeed_dev
IAMFullAccess and 1 more
Cancel
Previous
Next: Tags

Create Group and add user to this group







Install AWS CLI : https://docs.aws.amazon.com/AmazonECR/latest/userguide/getting-started-cli.html

Run command **aws configure [set user name and password to aws cli]**

```
E:\Project\Java_Projects\aws_csr_spring-boot\aws_csr_spring-boot>aws configure
AWS Access Key ID [****************R4OU]: [redacted]
AWS Secret Access Key [****************j3oZ]: [redacted]
Default region name [us-east-2]: us-east-2
Default output format [json]: json

E:\Project\Java_Projects\aws_csr_spring-boot\aws_csr_spring-boot>
```

```
aws ecr get-login-password --region us-east-2 | docker login --username AWS --password-stdin 079371596533.dkr.ecr.us-east-2.amazonaws.com
```

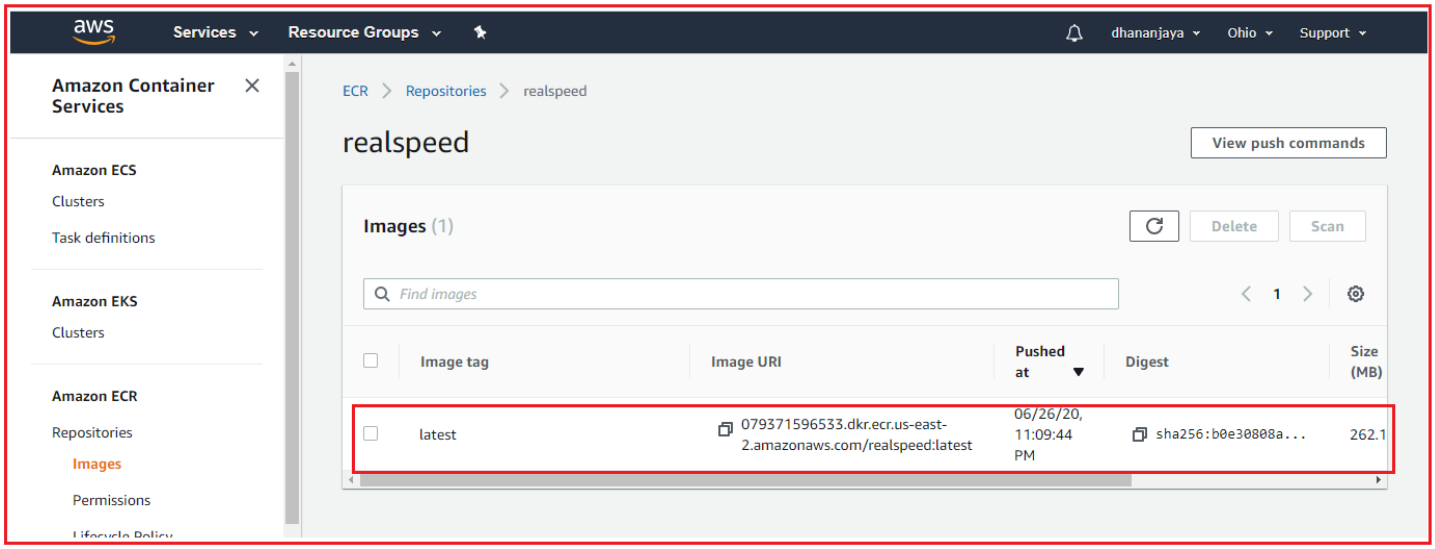
```
E:\Project\Java_Projects\aws_csr_spring-boot\aws_csr_spring-boot>aws ecr get-login-password --region us-east-2 | docker login --username AWS --password-stdin 07937
1596533.dkr.ecr.us-east-2.amazonaws.com
Login Succeeded
```

docker build -t realspeed .

docker tag realspeed:latest 079371596533.dkr.ecr.us-east-2.amazonaws.com/realspeed:latest

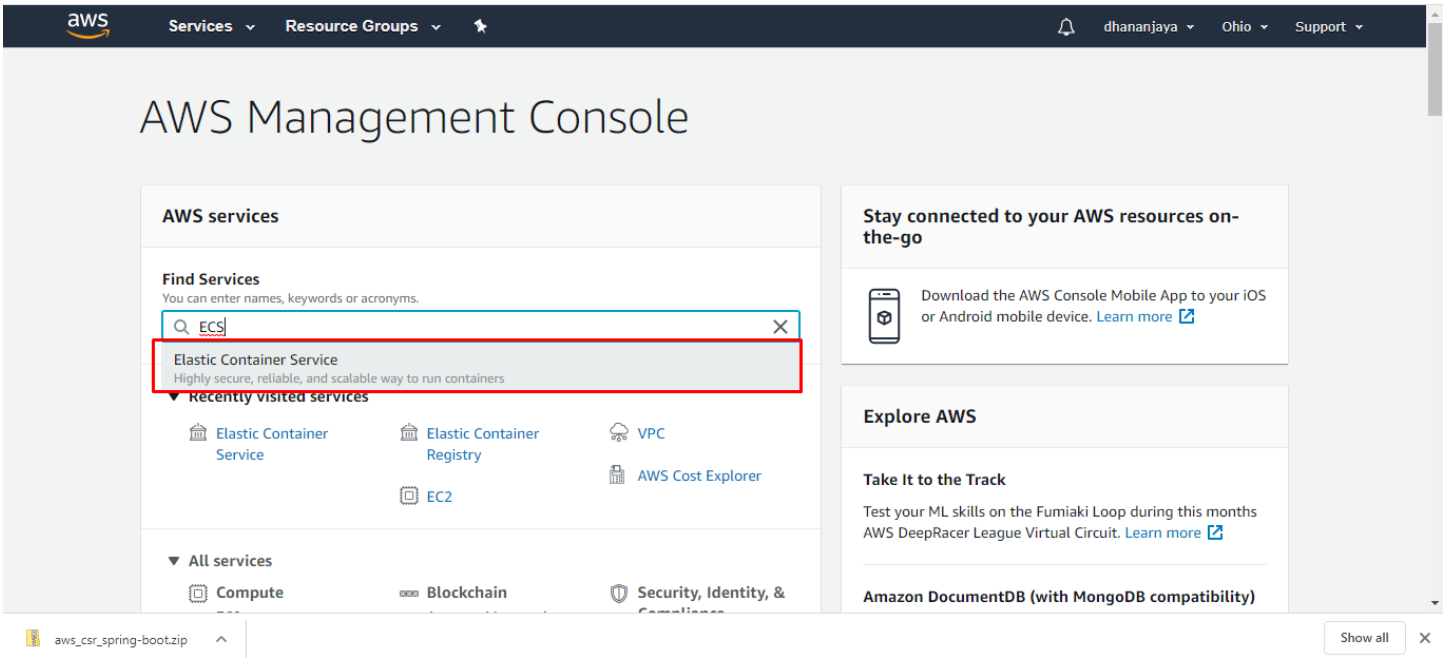
docker push 079371596533.dkr.ecr.us-east-2.amazonaws.com/realspeed:latest

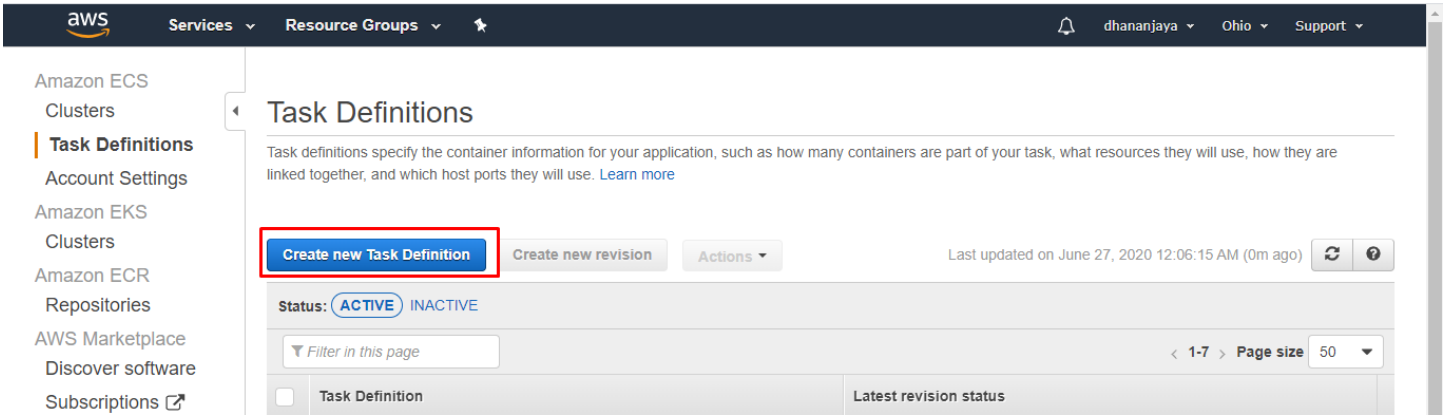
```
E:\Project\Java_Projects\aws_csr_spring-boot\aws_csr_spring-boot>docker push 079371596533.dkr.ecr.us-east-2.amazonaws.com/realspeed:latest
The push refers to repository [079371596533.dkr.ecr.us-east-2.amazonaws.com/realspeed]
668a9a23fd92: Pushing [======================>                            ]  7.275MB/16.5MB
35c20f26d188: Pushed
c3fe59dd9556: Pushing [=>                                                 ]  9.16MB/351.5MB
6ed1a81ba5b6: Pushed
a3483ce177ce: Pushed
ce6c8756685b: Pushing [==================================================>]  1.404MB
30339f20ced0: Pushing [=>                                                 ]  3.832MB/122.6MB
0eb22bfb707d: Pushing [========>                                          ]  7.833MB/44.31MB
a2ae92ffcd29: Waiting
```

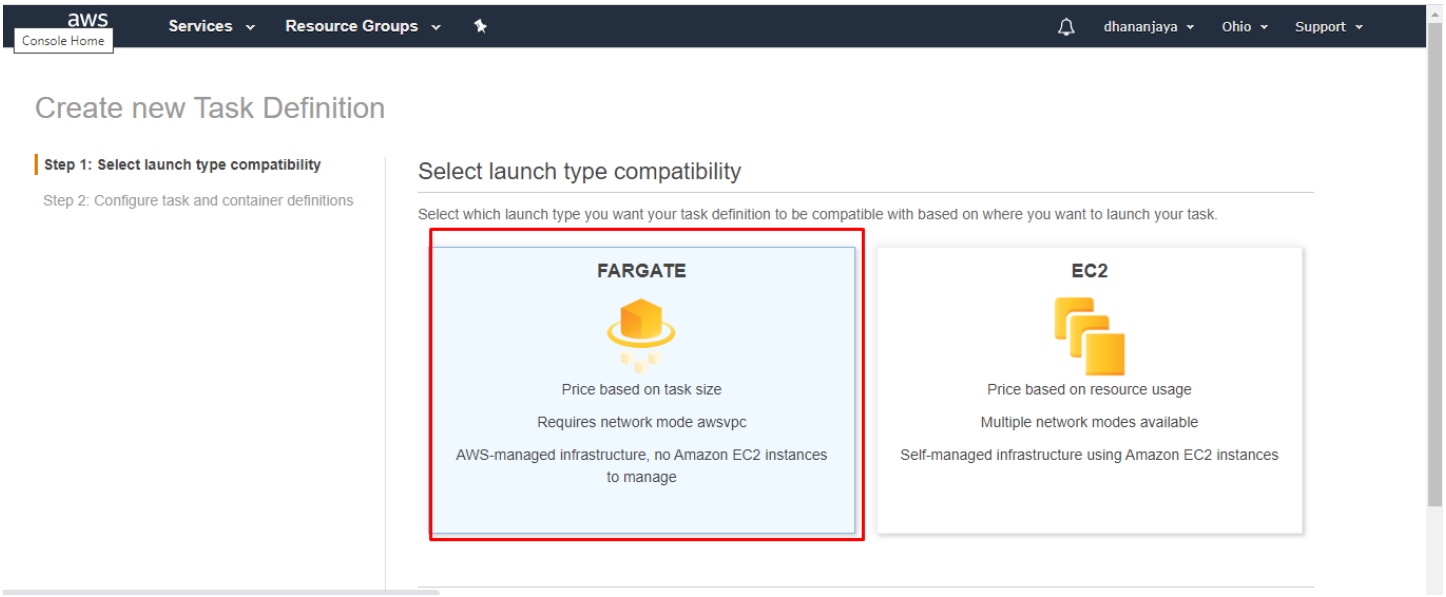


Now Image is pushed to aws repository.

Go to Amazon ECS service







Create new Task Definition

Step 1: Select launch type compatibility

Step 2: Configure task and container definitions

Configure task and container definitions

A task definition specifies which containers are included in your task and how they interact with each other. You can also specify data volumes for your containers to use. Learn more

Task Definition Name* docker-spring-boot

Requires Compatibilities* FARGATE

Task Role None

Optional IAM role that tasks can use to make API requests to authorized AWS services. Create an Amazon Elastic Container Service Task Role in the IAM Console

Task execution role ecsTaskExecutionRole

Task size

The task size allows you to specify a fixed size for your task. Task size is required for tasks using the Fargate launch type and is optional for the EC2 launch type. Container level memory settings are optional when task size is set. Task size is not supported for Windows containers.

Task memory (GB) 0.5GB

The valid memory range for 0.25 vCPU is: 0.5GB - 2GB.

Task CPU (vCPU) 0.25 vCPU

The valid CPU for 0.5 GB memory is: 0.25 vCPU

Task memory maximum allocation for container memory reservation

0 — 512 shared of 512 MiB

Task CPU maximum allocation for containers

0 — 256 shared of 256 CPU units

Container Definitions

Add container

Standard

Container name* docker-spring-boot

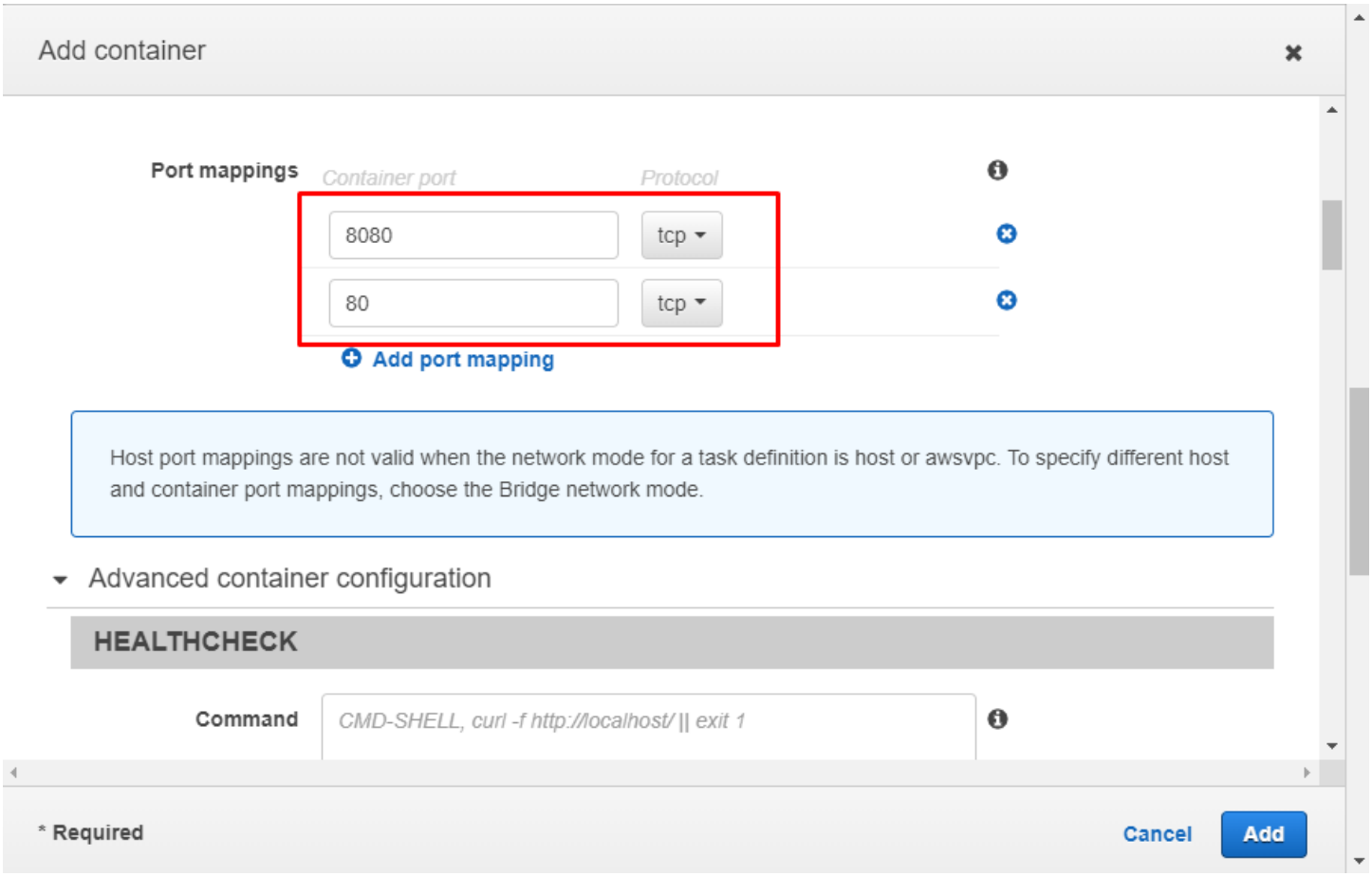
Image* 079371596533.dkr.ecr.us-east-2.amazonaws.com/realspeed

Private repository authentication*

Memory Limits (MiB) Soft limit 128

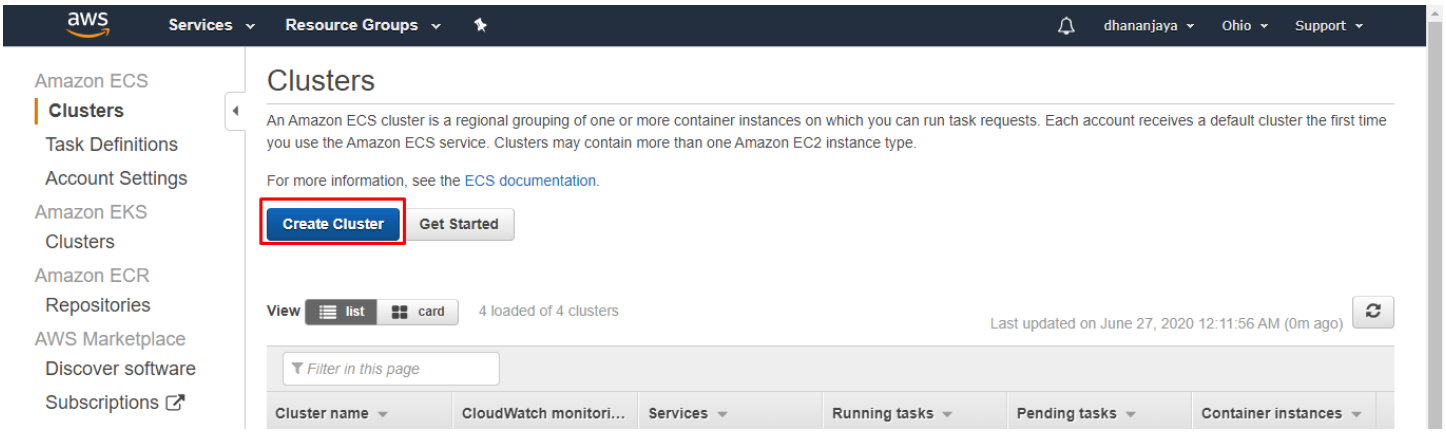
Add Hard limit

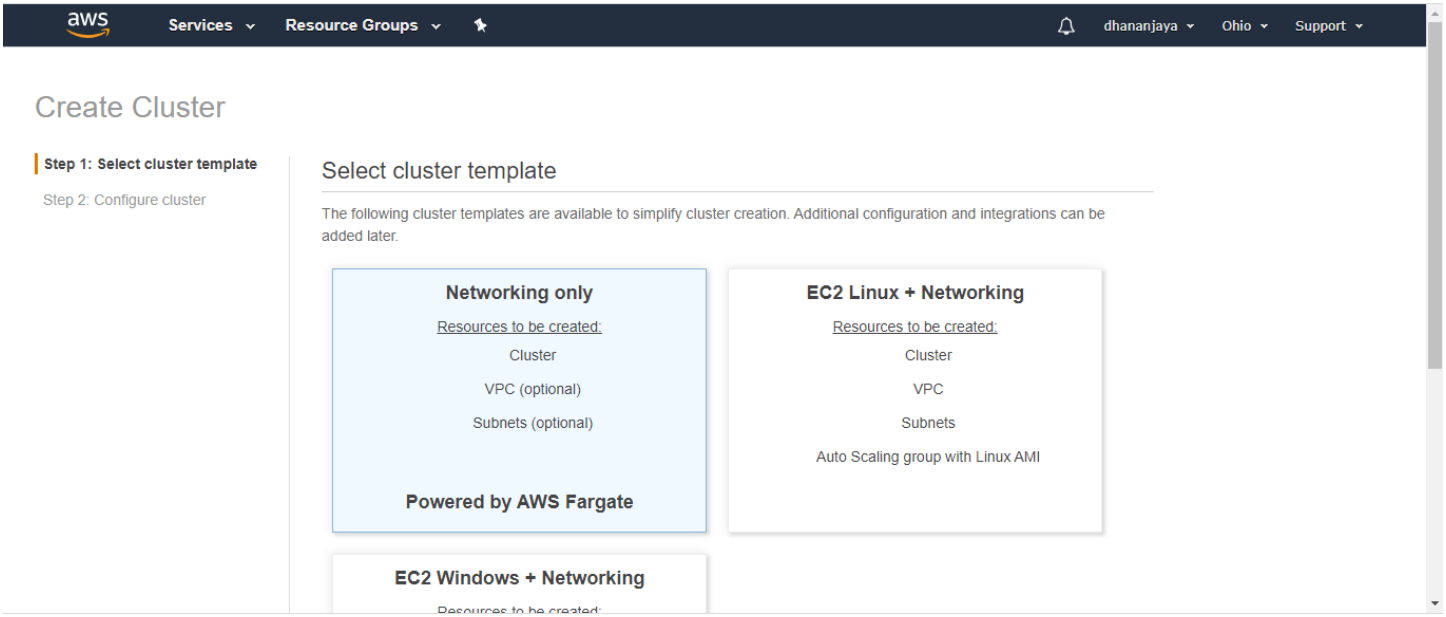
Add Port to container

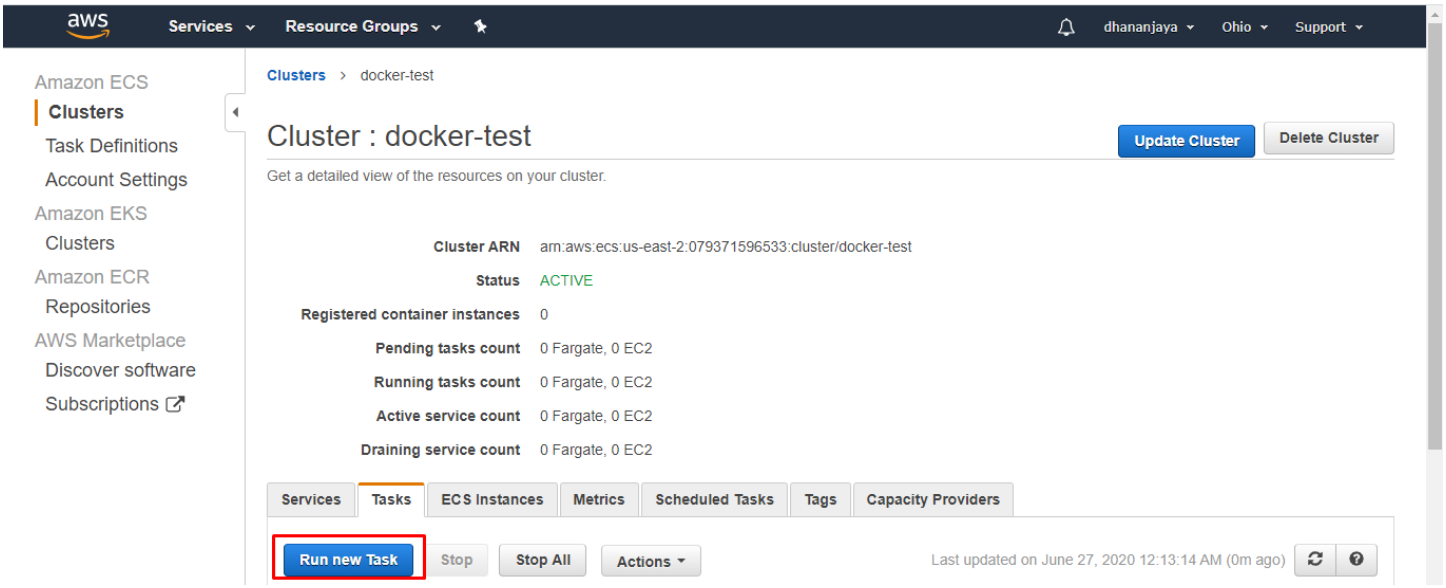


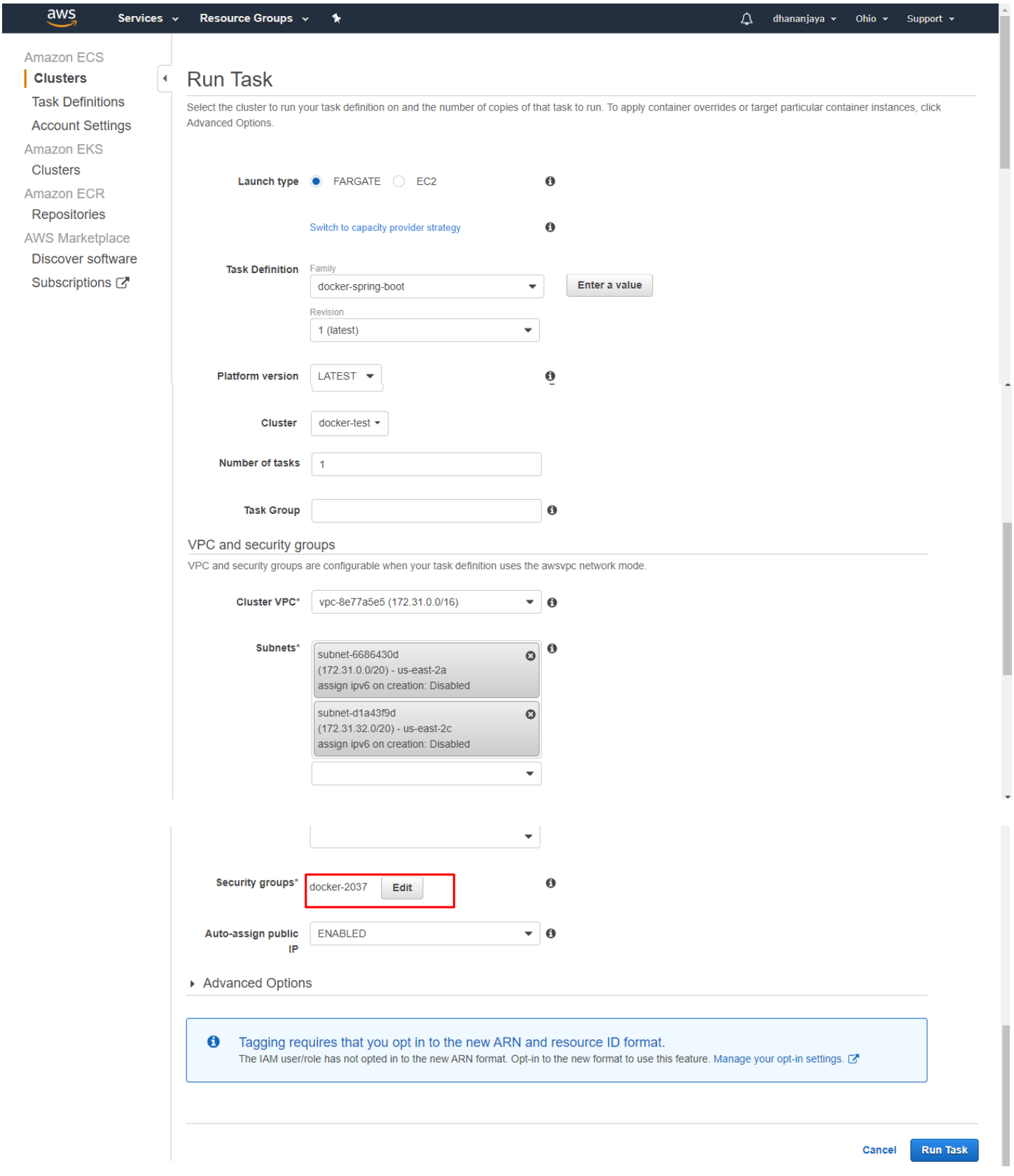
Now task is ready.

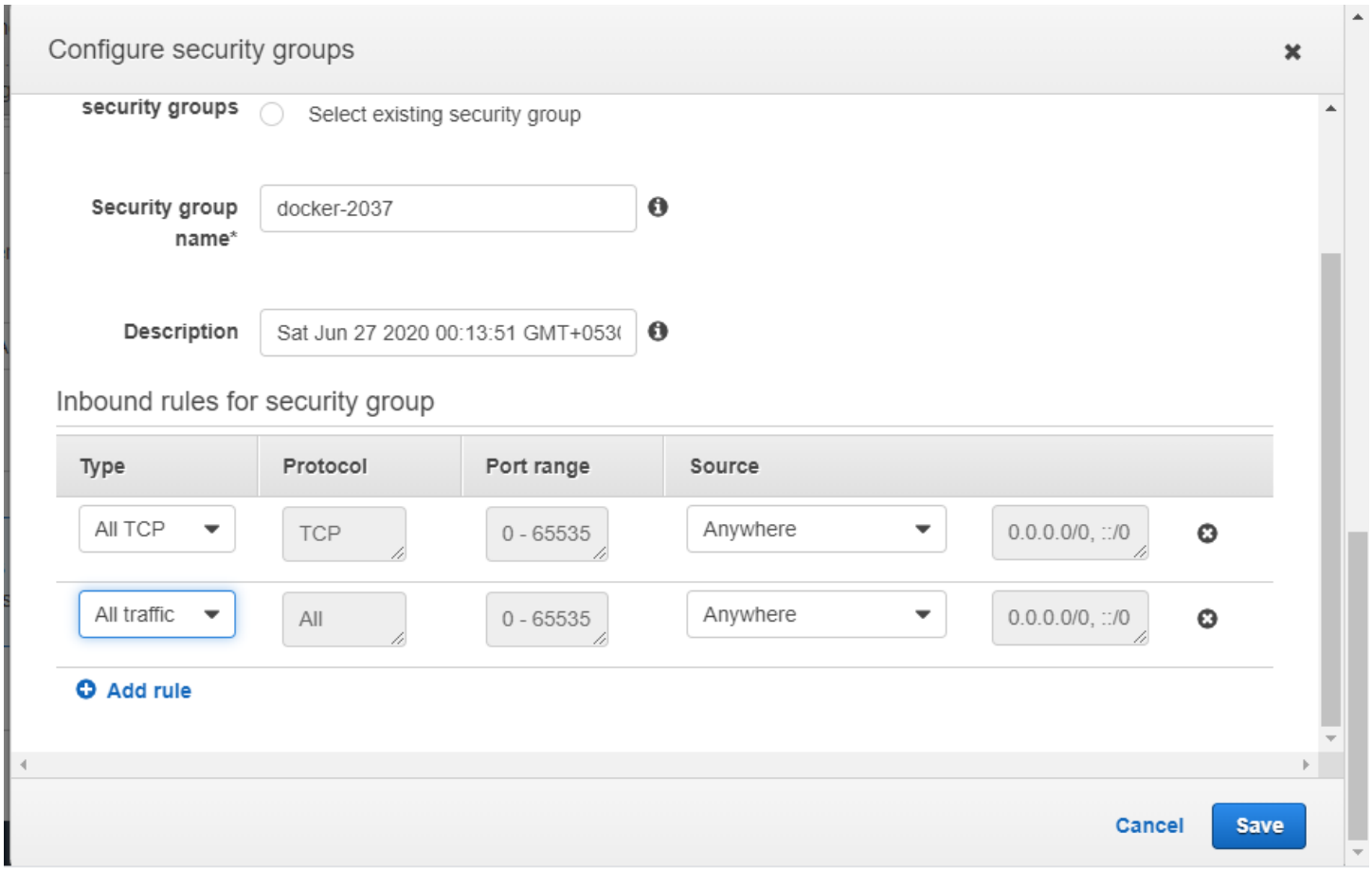
Create a cluster



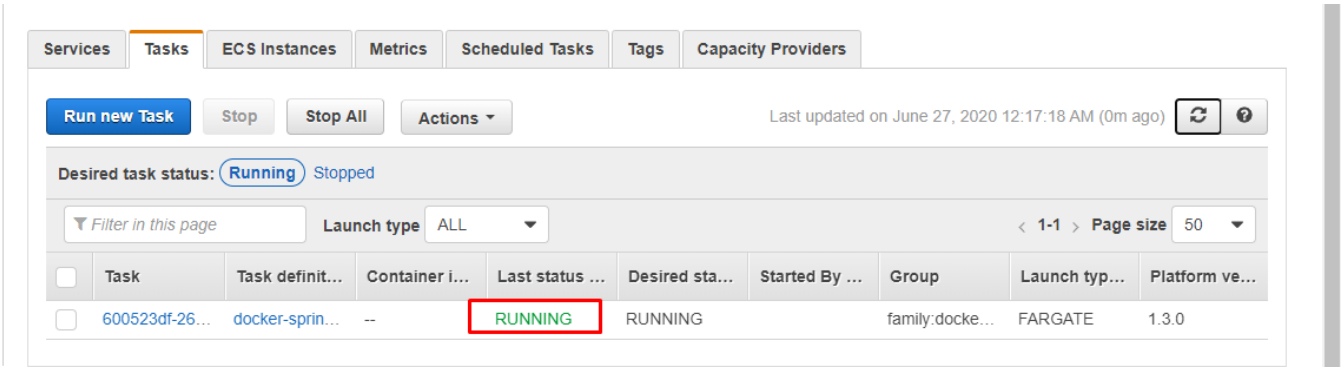

aws
Services
Resource Groups
dhananjaya
Ohio
Support
Create Cluster
Step 1: Select cluster template
Step 2: Configure cluster
Select cluster template
The following cluster templates are available to simplify cluster creation. Additional configuration and integrations can be added later.
Networking only
Resources to be created:
Cluster
VPC (optional)
Subnets (optional)
Powered by AWS Fargate
EC2 Linux + Networking
Resources to be created:
Cluster
VPC
Subnets
Auto Scaling group with Linux AMI
EC2 Windows + Networking

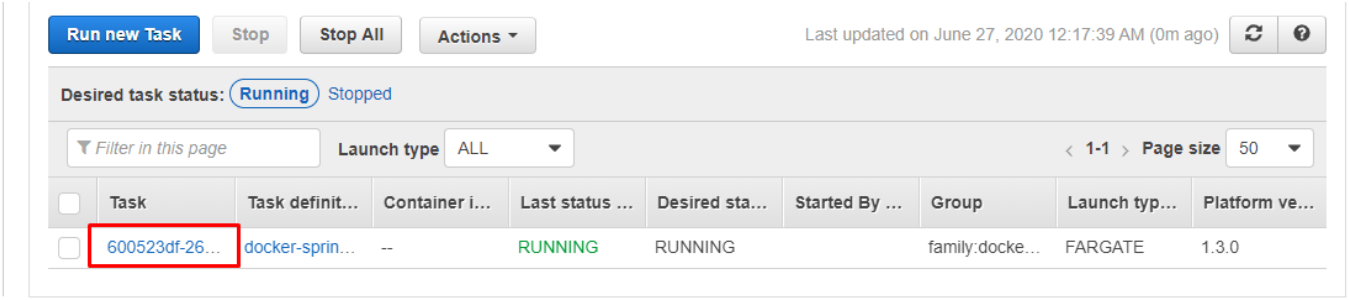

aws
Services
Resource Groups
dhananjaya
Ohio
Support
Amazon ECS
Clusters
Task Definitions
Account Settings
Amazon EKS
Clusters
Amazon ECR
Repositories
AWS Marketplace
Discover software
Subscriptions
Clusters > docker-test
Cluster : docker-test
Update Cluster
Delete Cluster
Get a detailed view of the resources on your cluster.
Cluster ARN arn:aws:ecs:us-east-2:079371596533:cluster/docker-test
Status ACTIVE
Registered container instances 0
Pending tasks count 0 Fargate, 0 EC2
Running tasks count 0 Fargate, 0 EC2
Active service count 0 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 June 27, 2020 12:13:14 AM (0m ago)

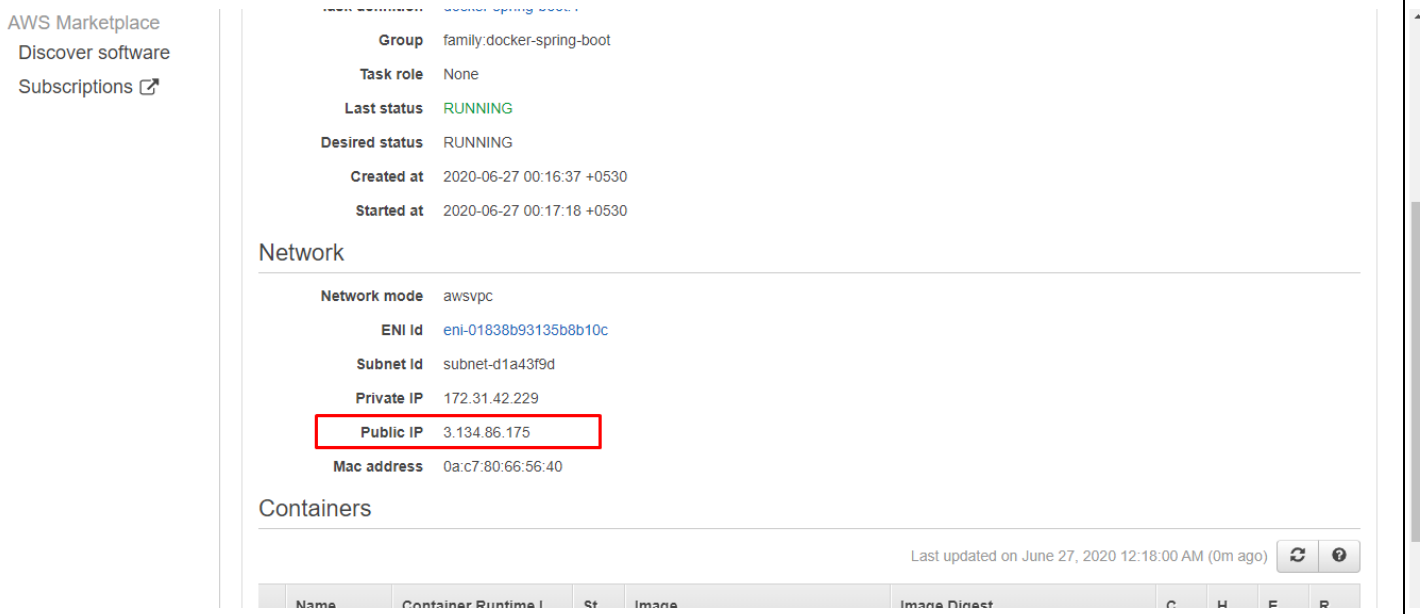

aws
Services
Resource Groups
dhananjaya
Ohio
Support
Amazon ECS
Clusters
Task Definitions
Account Settings
Amazon EKS
Clusters
Amazon ECR
Repositories
AWS Marketplace
Discover software
Subscriptions
Run Task
Select the cluster to run your task definition on and the number of copies of that task to run. To apply container overrides or target particular container instances, click Advanced Options.
Launch type
FARGATE
EC2
Switch to capacity provider strategy
Task Definition
Family
docker-spring-boot
Enter a value
Revision
1 (latest)
Platform version
LATEST
Cluster
docker-test
Number of tasks
1
Task Group
VPC and security groups
VPC and security groups are configurable when your task definition uses the awsvpc network mode.
Cluster VPC*
vpc-8e77a5e5 (172.31.0.0/16)
Subnets*
subnet-6686430d
(172.31.0.0/20) - us-east-2a
assign ipv6 on creation: Disabled
subnet-d1a43f9d
(172.31.32.0/20) - us-east-2c
assign ipv6 on creation: Disabled
Security groups*
docker-2037
Edit
Auto-assign public IP
ENABLED
Advanced Options
Tagging requires that you opt in to the new ARN and resource ID format.
The IAM user/role has not opted in to the new ARN format. Opt-in to the new format to use this feature. Manage your opt-in settings.
Cancel
Run Task

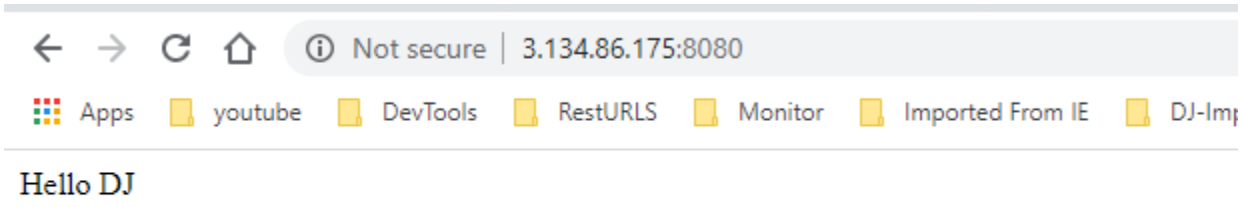


Now after save run the task and wait for deployment




Run new Task
Stop
Stop All
Actions
Last updated on June 27, 2020 12:17:39 AM (0m ago)
Desired task status: Running Stopped
Filter in this page
Launch type ALL
1-1
Page size 50
Task
Task definit...
Container i...
Last status ...
Desired sta...
Started By ...
Group
Launch typ...
Platform ve...
600523df-26...
docker-sprin...
--
RUNNING
RUNNING
family:docke...
FARGATE
1.3.0


AWS Marketplace
Discover software
Subscriptions
Group family:docker-spring-boot
Task role None
Last status RUNNING
Desired status RUNNING
Created at 2020-06-27 00:16:37 +0530
Started at 2020-06-27 00:17:18 +0530
Network
Network mode awsvpc
ENI Id eni-01838b93135b8b10c
Subnet Id subnet-d1a43f9d
Private IP 172.31.42.229
Public IP 3.134.86.175
Mac address 0a:c7:80:66:56:40
Containers
Last updated on June 27, 2020 12:18:00 AM (0m ago)


Not secure | 3.134.86.175:8080
Apps
youtube
DevTools
RestURLS
Monitor
Imported From IE
Hello DJ