CAPSTONE PROJECT Abdul Samim Mondal(UST,IN)

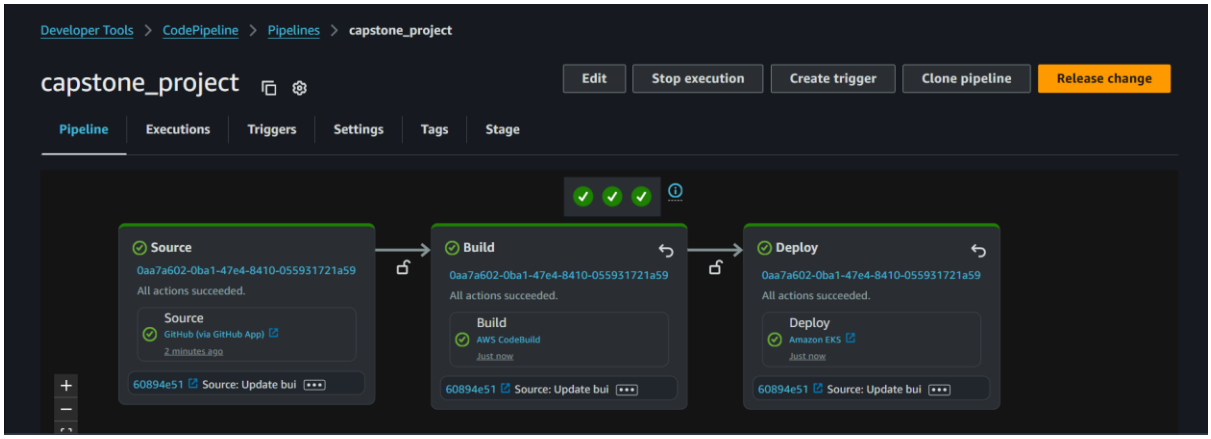
Project repo - https://github.com/abdulsamimmondal/aws-capstone-samim.git

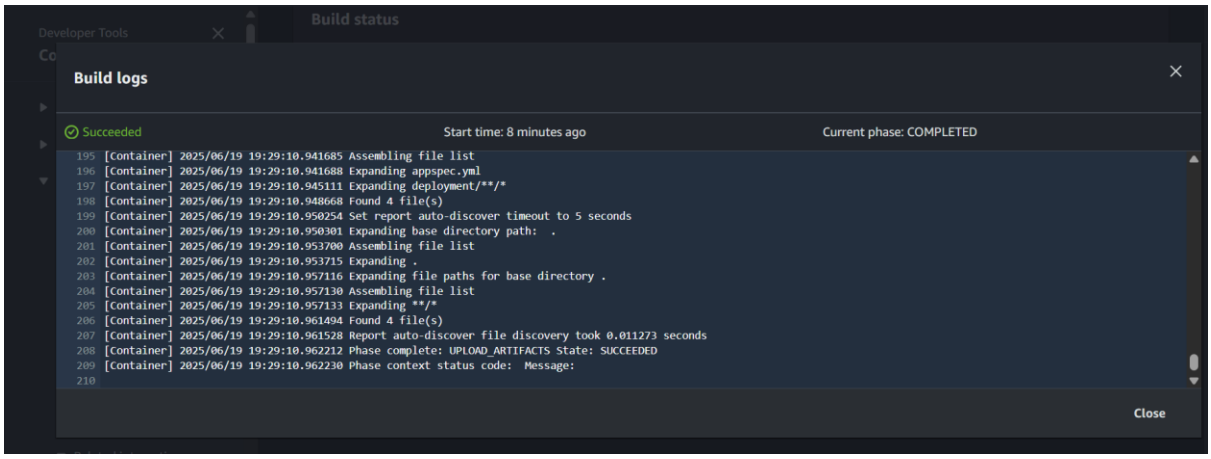
Github repo- https://github.com/abdulsamimmondal/cinema-capstone.git

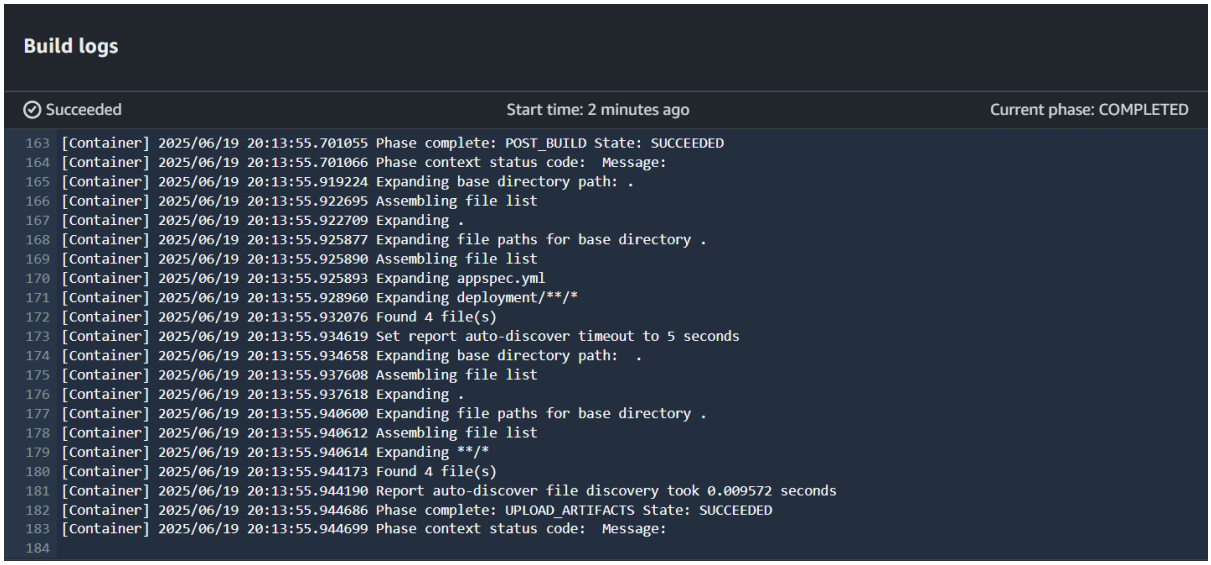
Step1: clone the repo

```
root@ip-172-31-86-226:/home/ubuntu/cinema-capstone# ls
 Admin.txt     Cinema_Web_Site   LICENSE     'SQL Tables'   capstone_project.zip   classes      src       web.xml
'CSV Files'    Dockerfile        README.md    WebContent    cinema.war             deployment   target    webapp
root@ip-172-31-86-226:/home/ubuntu/cinema-capstone#
```

Pipeline-







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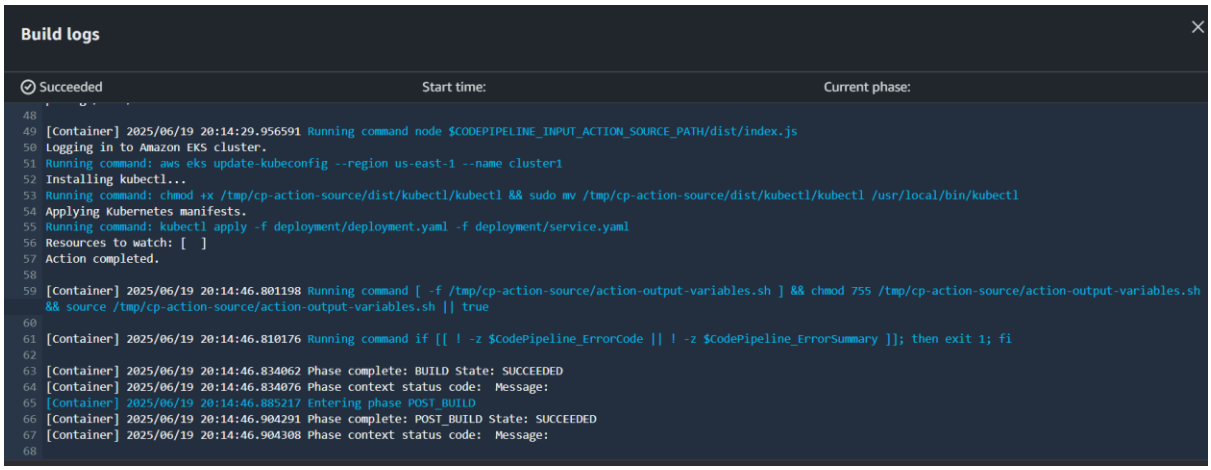
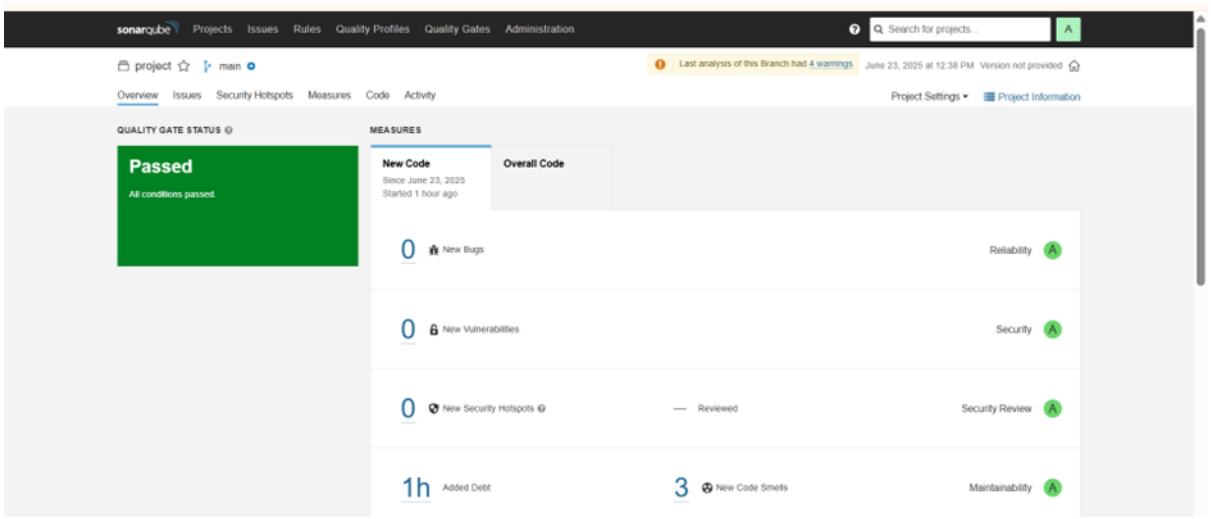
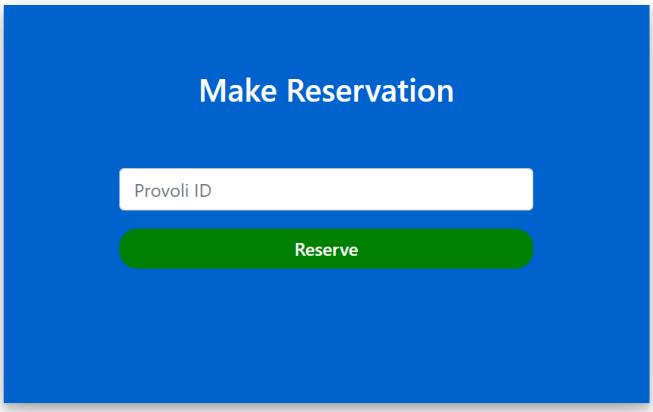


Sonarqube-



Output:



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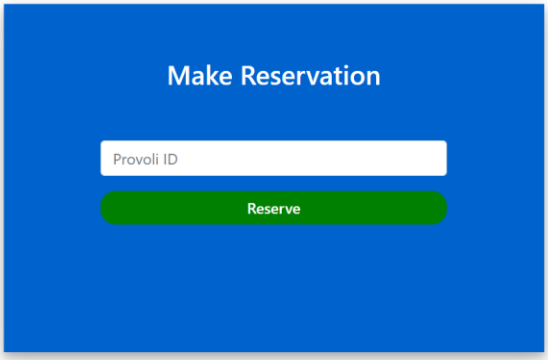
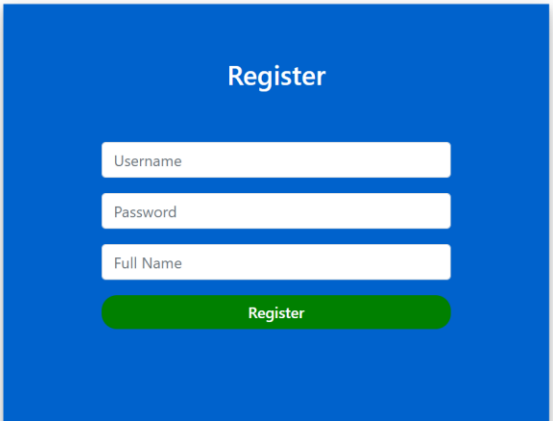
SUCCESS! Reservation added to the database.



SUCCESS! Client added to the database.




```
root@ip-172-31-86-226:/home/ubuntu/cinema-capstone# PGPASSWORD=mdonly123 psql -h cinema-db-instance.crqwg8ys63wt.us-east-1.rds.amazonaws.com
 \
  -U postgres -d postgres \
  -c "SELECT COUNT(*) FROM clients; SELECT COUNT(*) FROM reservations;"
 count
-------
     1
(1 row)

 count
-------
     0
(1 row)
```

```
  -c "SELECT * FROM reservations ORDER BY id DESC LIMIT 5;"
 id | provoli_id | client_id
----+------------+-----------
  1 |          1 |         2
(1 row)

root@ip-172-31-86-226:/home/ubuntu/cinema-capstone# PGPASSWORD=mdonly123 psql -h cinema-db-instance.crqwg8ys63wt.us-east-1.rds.amazonaws.com
 \
  -U postgres -d postgres \
  -c "SELECT COUNT(*) FROM reservations;"
 count
-------
     1
(1 row)
```

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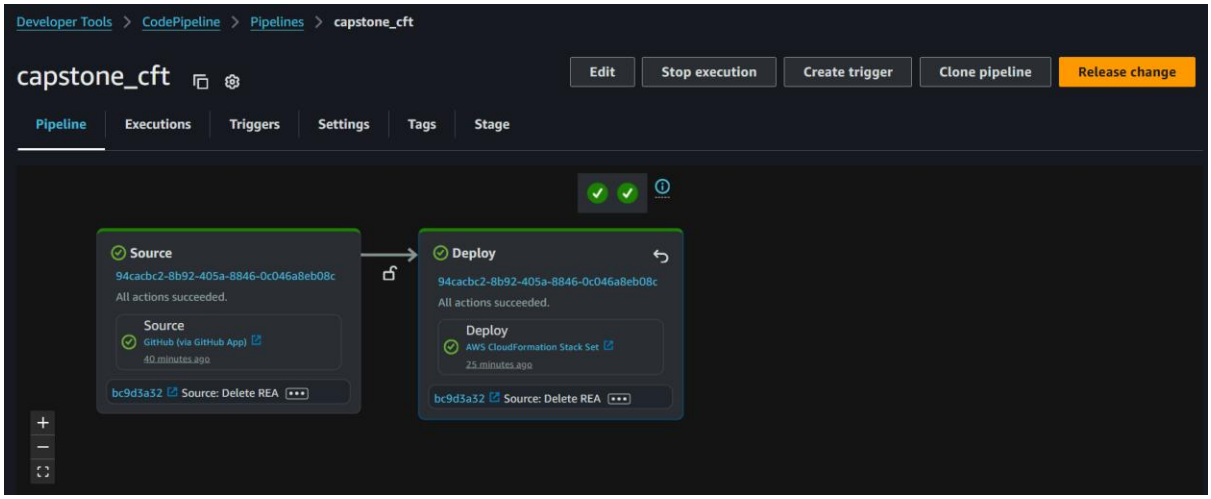
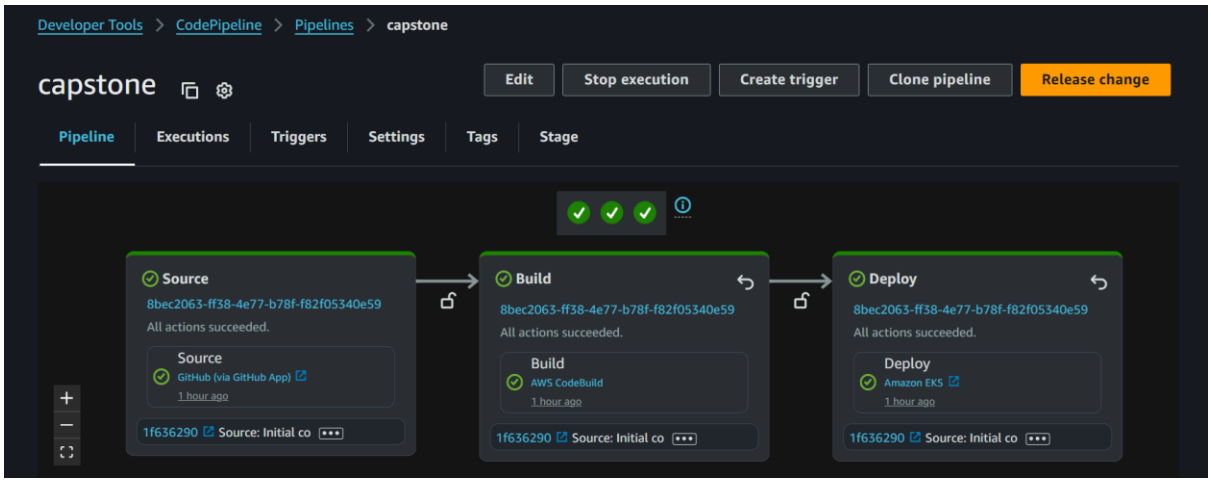
CLOUDFORMATION TEMPLATE

Repo link- https://github.com/abdulsamimmondal/capstone-cft-multi_region.git

Pipeline repo link- https://github.com/abdulsamimmondal/capstone-east-2.git



After the resources are created in the other region deploy app through pipeline



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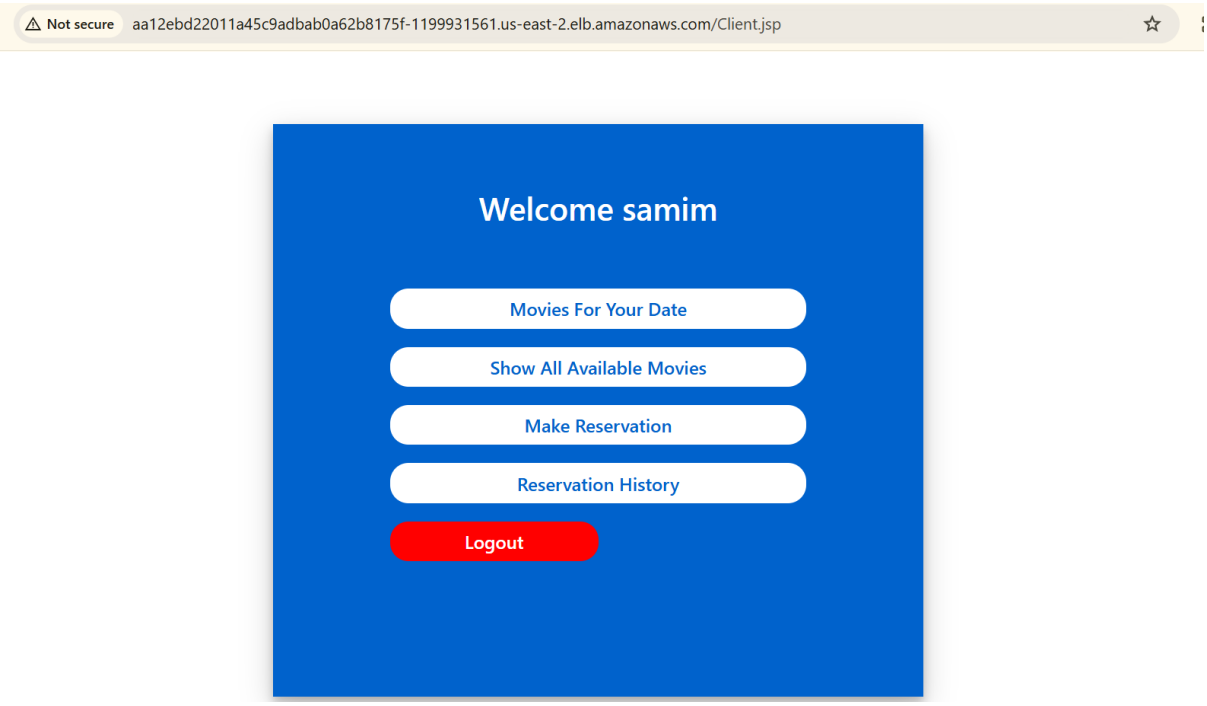
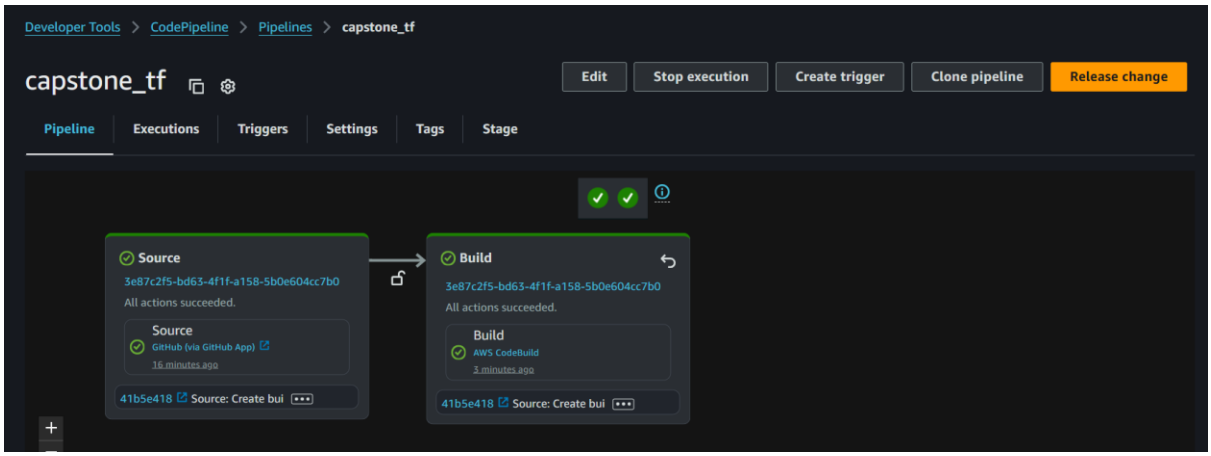
The app is working in the other region.



Terraform template-

Github repo- https://github.com/abdulsamimmondal/capstone-tf.git

Pipeline-



The infrastructure has been created now we will deploy our application on this infrastructure through another pipeline.

Github repo – https://github.com/abdulsamimmondal/cinema-capstone.git

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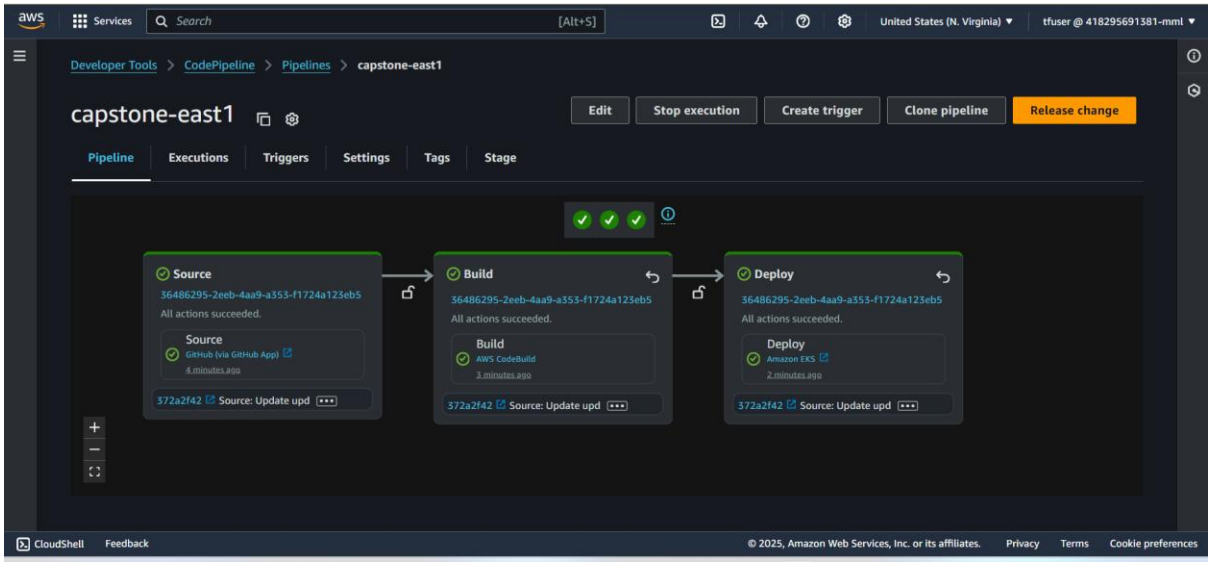
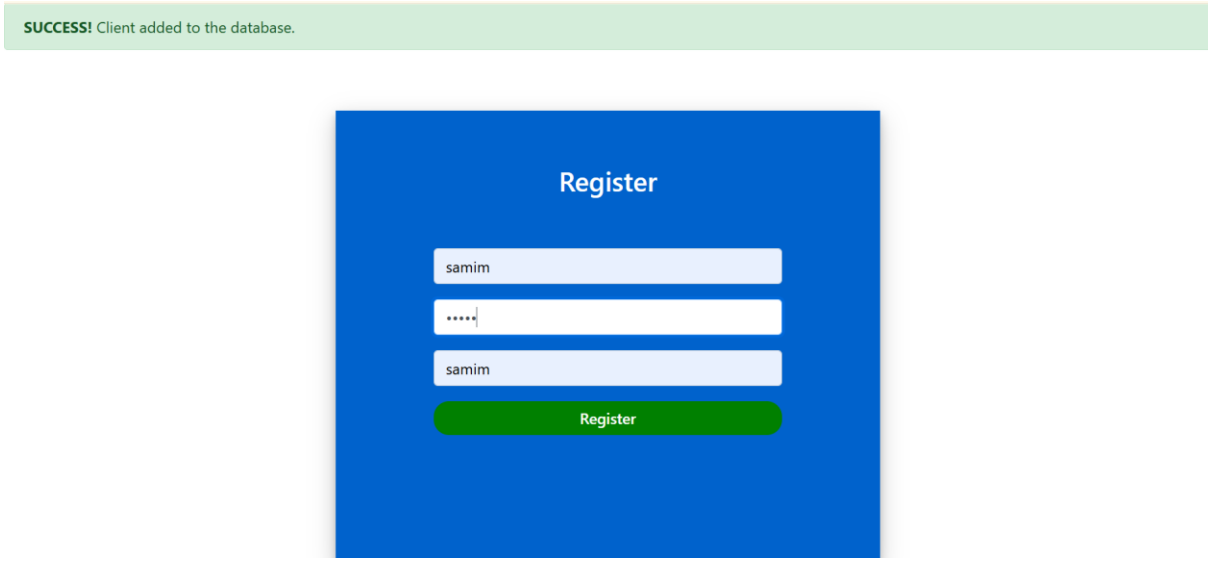
Pipeline-



The app is working-



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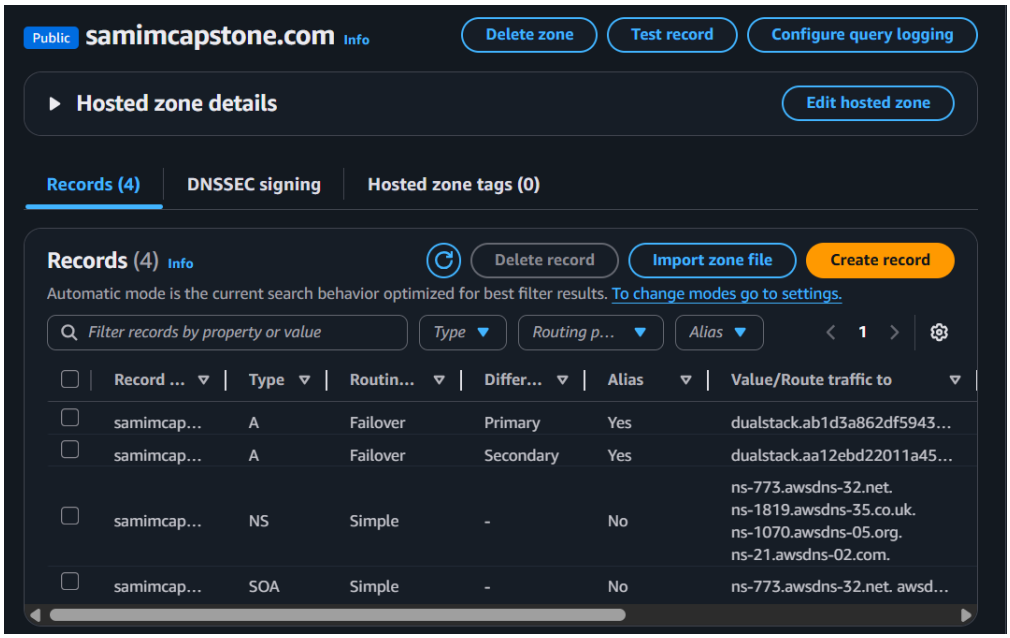
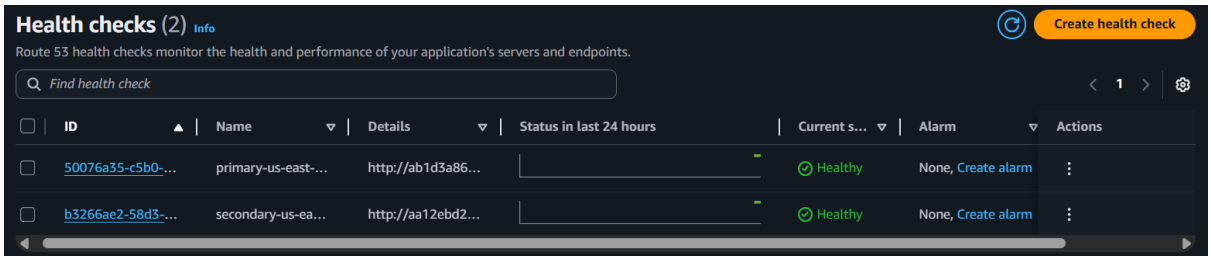
Route 53 failover routing

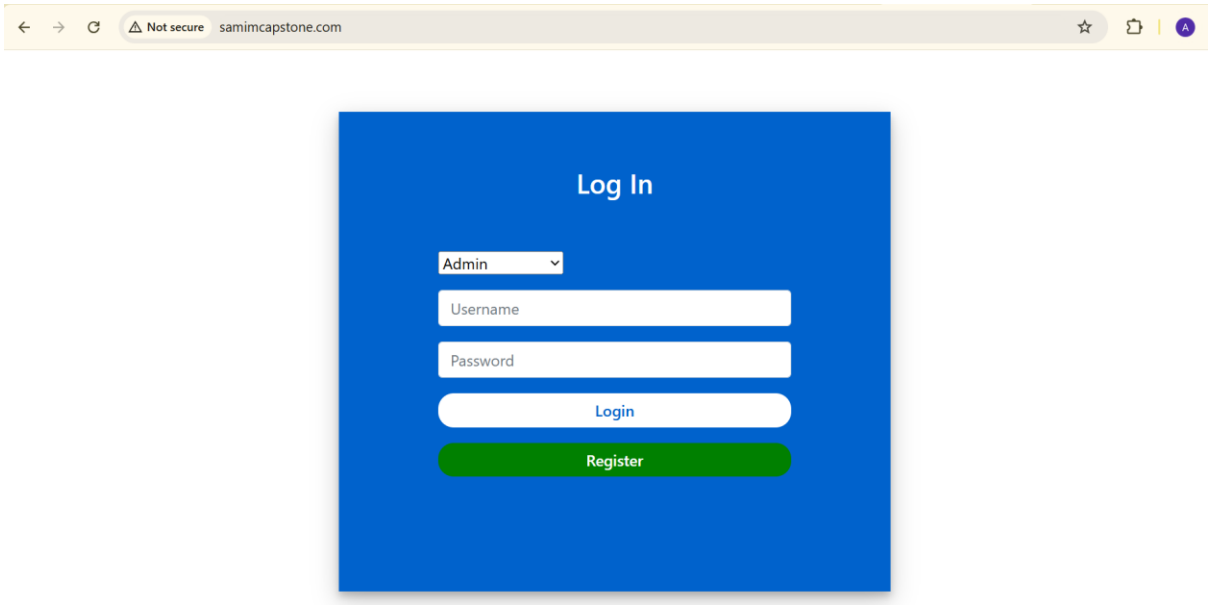
Domain registration-



Health checks-



Domain is working-



Access the app at- http://samimcapstone.com

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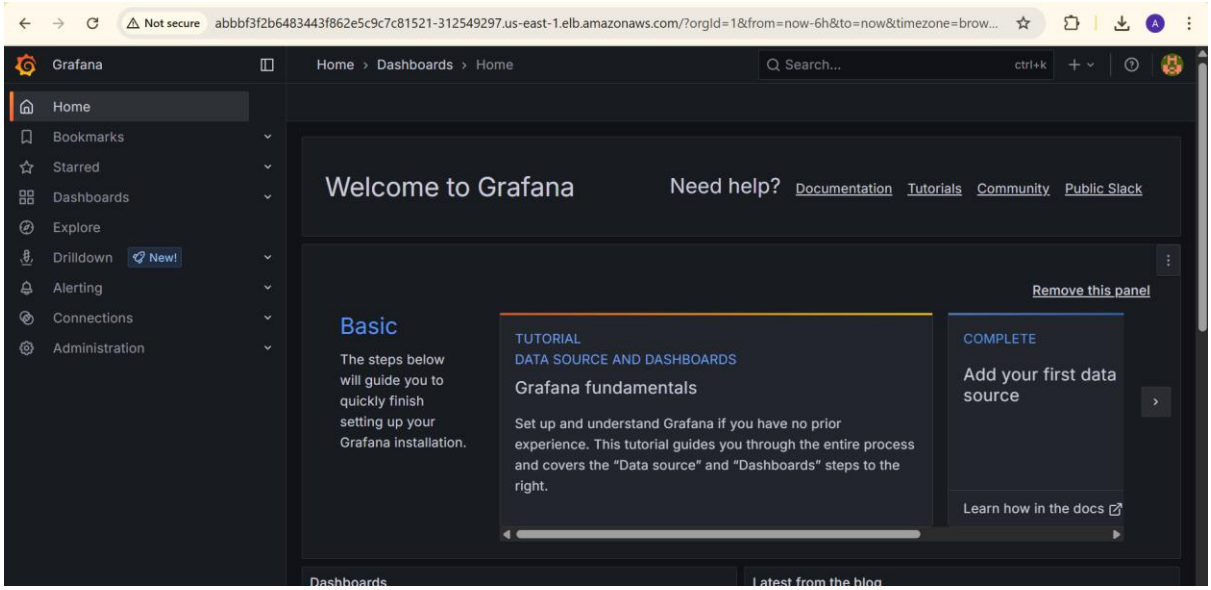
Prometheus and Grafana -

Install Prometheus and graffana

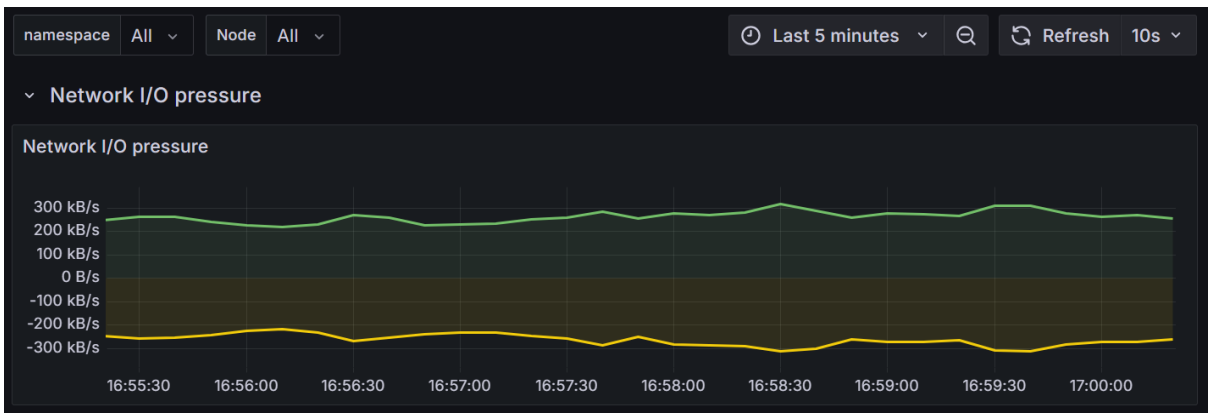
```
root@ip-10-0-6-72:/home/ubuntu# kubectl get pods -n prometheus
NAME                                                     READY   STATUS    RESTARTS   AGE
alertmanager-stable-kube-prometheus-sta-alertmanager-0   2/2     Running   0          6m50s
prometheus-stable-kube-prometheus-sta-prometheus-0       2/2     Running   0          6m49s
stable-grafana-56bdbb9b4b-7gpqk                          3/3     Running   0          6m53s
stable-kube-prometheus-sta-operator-66847554f8-nf9sk     1/1     Running   0          6m53s
stable-kube-state-metrics-7fc6b5c5d4-tkwqp               1/1     Running   0          6m53s
stable-prometheus-node-exporter-fsfhk                    1/1     Running   0          6m53s
stable-prometheus-node-exporter-rf4rs                    1/1     Running   0          6m53s
root@ip-10-0-6-72:/home/ubuntu# kubectl get svc -n prometheus
NAME                                      TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)                      AGE
alertmanager-operated                     ClusterIP   None             <none>        9093/TCP,9094/TCP,9094/UDP   7m18s
prometheus-operated                       ClusterIP   None             <none>        9090/TCP                     7m17s
stable-grafana                            ClusterIP   172.20.15.192    <none>        80/TCP                       7m21s
stable-kube-prometheus-sta-alertmanager   ClusterIP   172.20.112.194   <none>        9093/TCP,8080/TCP            7m21s
stable-kube-prometheus-sta-operator       ClusterIP   172.20.72.191    <none>        443/TCP                      7m21s
stable-kube-prometheus-sta-prometheus     ClusterIP   172.20.107.17    <none>        9090/TCP,8080/TCP            7m21s
stable-kube-state-metrics                 ClusterIP   172.20.232.26    <none>        8080/TCP                     7m21s
stable-prometheus-node-exporter           ClusterIP   172.20.237.107   <none>        9100/TCP                     7m21s
root@ip-10-0-6-72:/home/ubuntu#
```

Open Grafana



Create dashboard

Kubernetes monitoring dashboard



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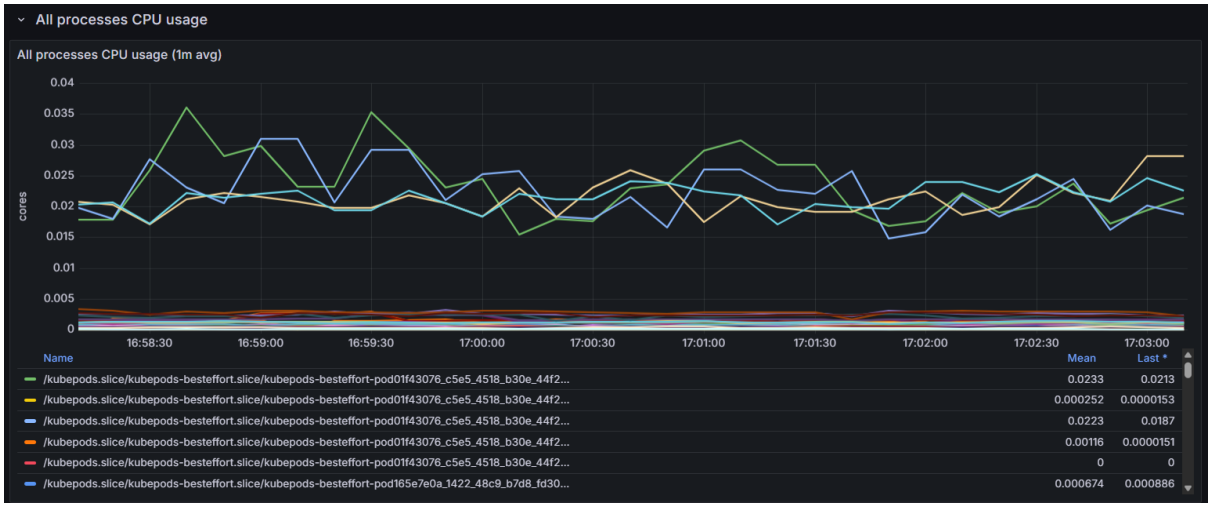

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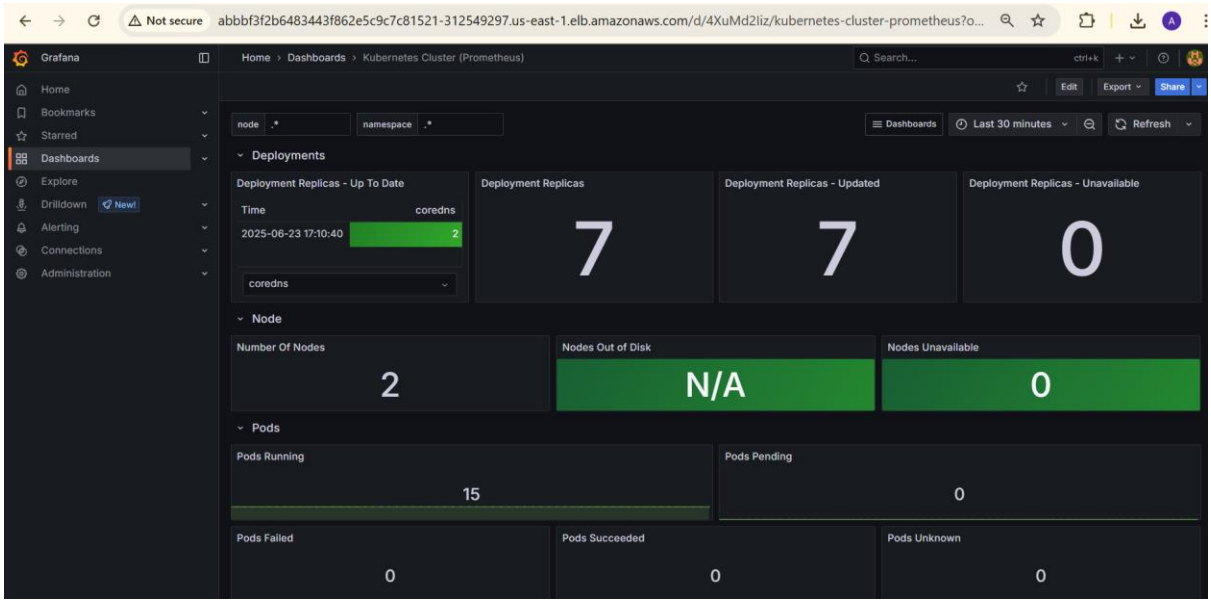
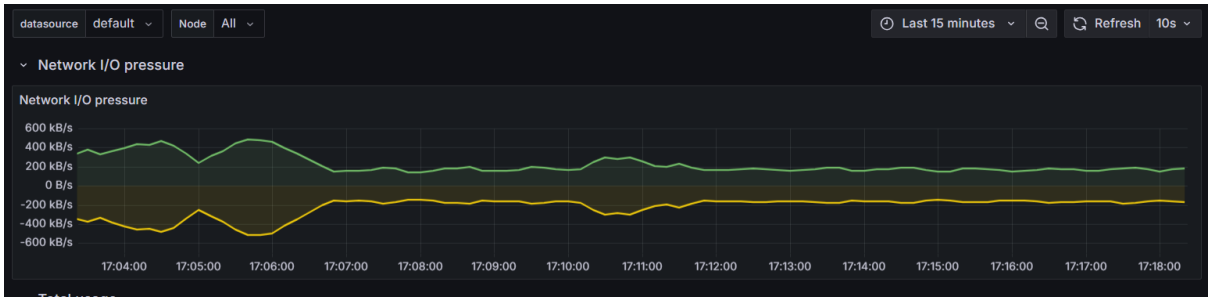
Pod monitoring dashboard



Kubernetes cluster monitoring dashboard



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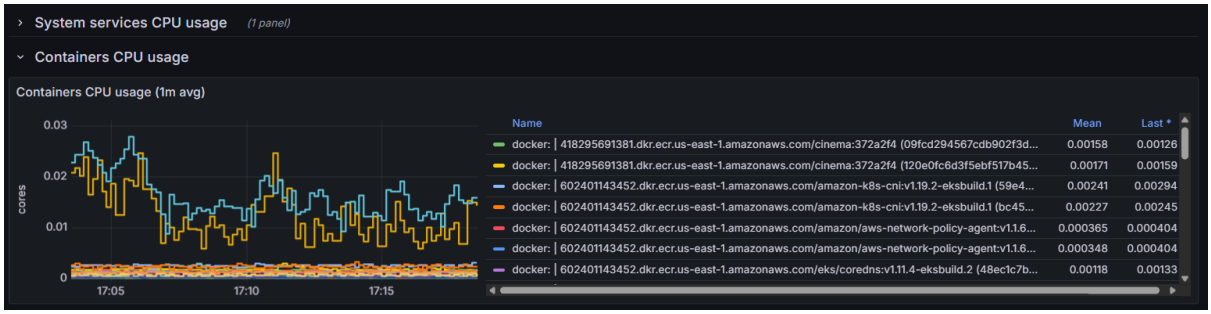

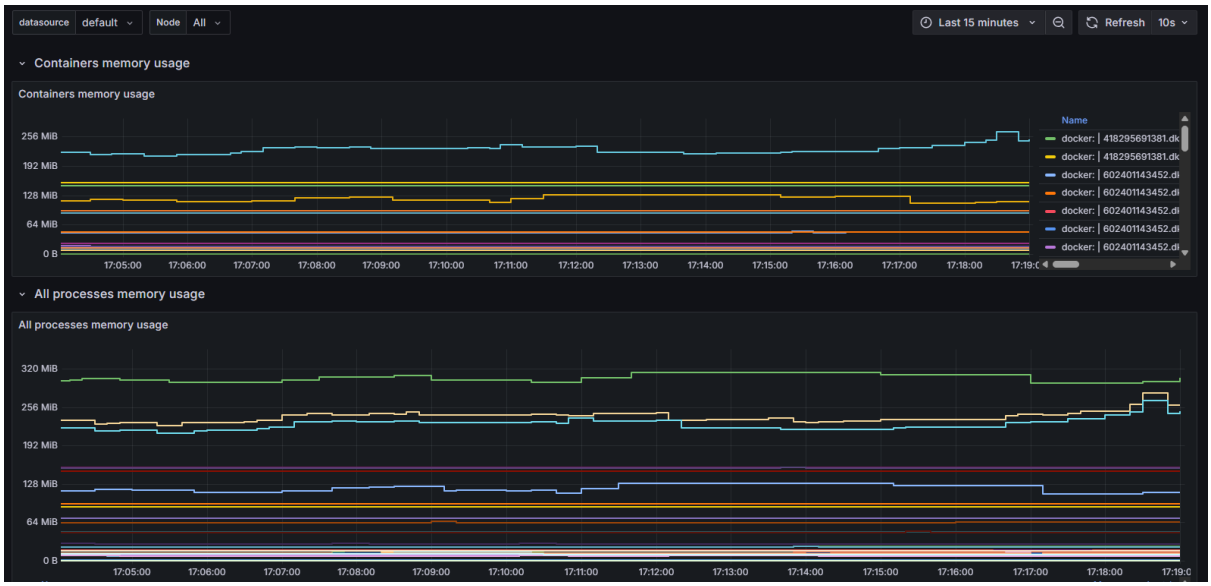

CLOUDWATCH MONITORING

```
root@ip-10-0-0-160:/home/ubuntu# kubectl get pods -n amazon-cloudwatch -w
NAME                                                     READY   STATUS    RESTARTS   AGE
amazon-cloudwatch-observability-controller-manager-76c7956t2wl9   1/1     Running   0          10s
cloudwatch-agent-hqm5l                                   1/1     Running   0          4s
cloudwatch-agent-llq9z                                   1/1     Running   0          4s
fluent-bit-7p9vg                                         1/1     Running   0          10s
fluent-bit-tr2hf                                         1/1     Running   0          10s
```

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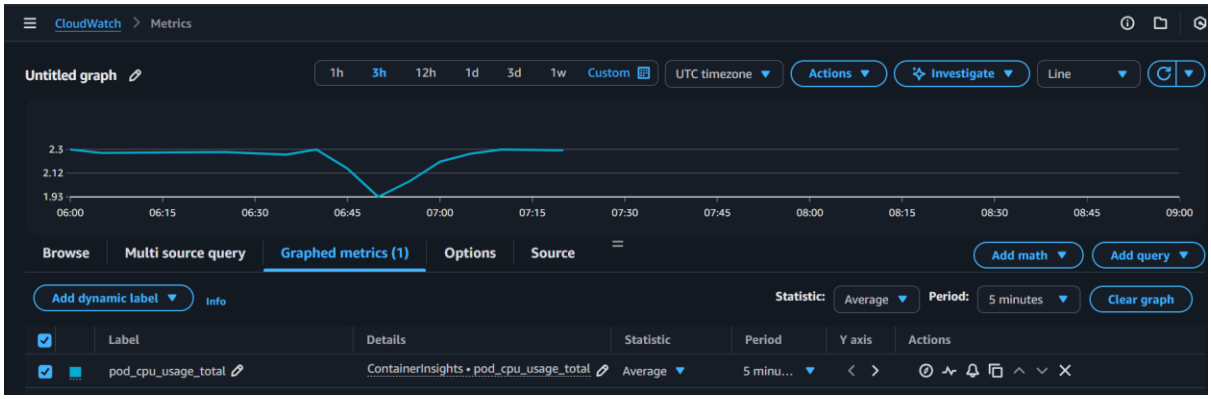

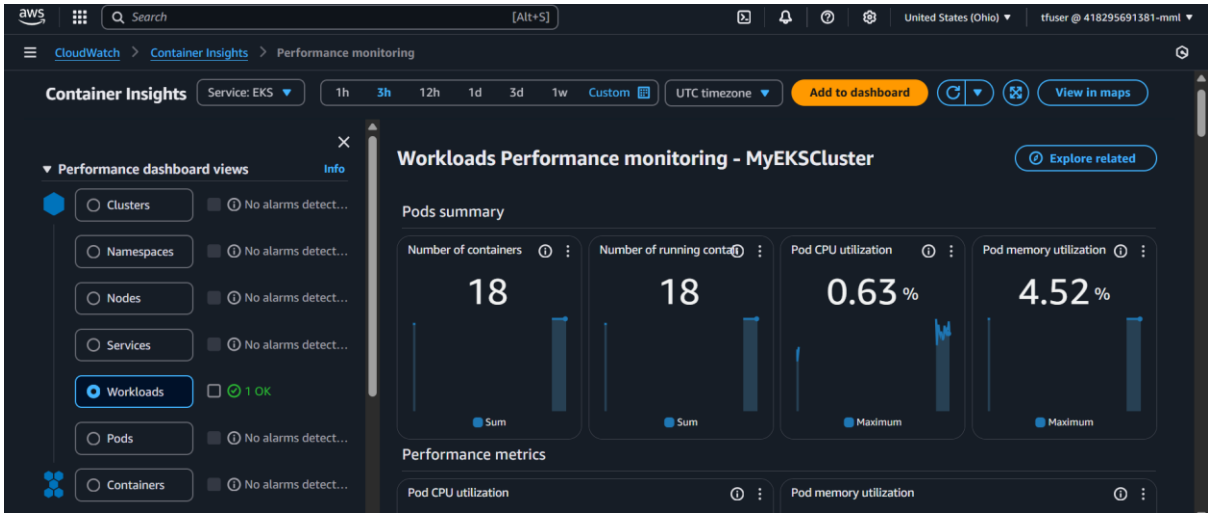

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NOTIFY PIPELINE FAILURES-