TASK = Deployment mario game

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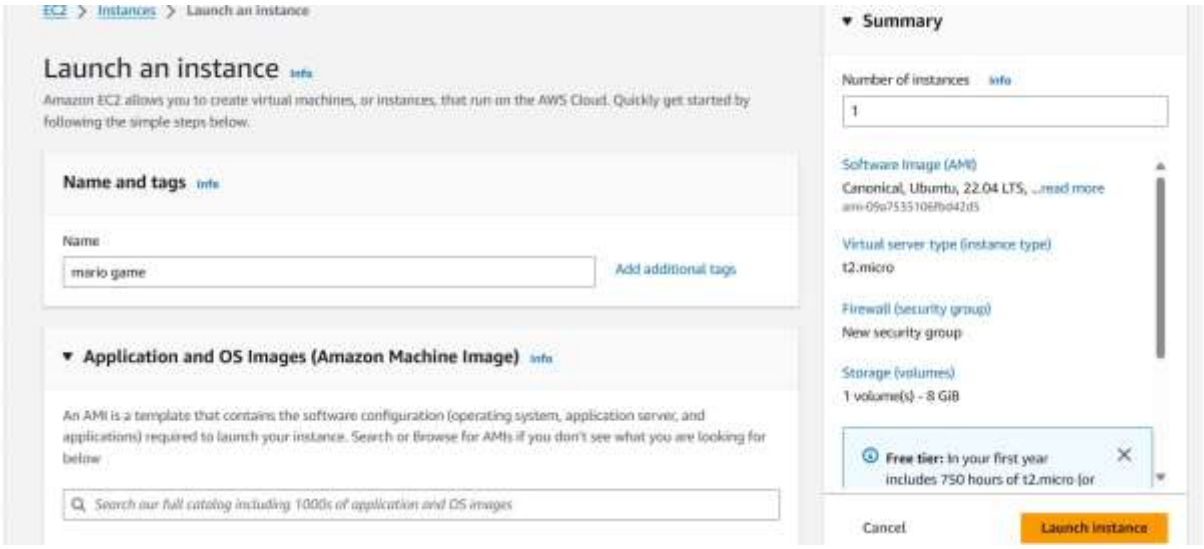
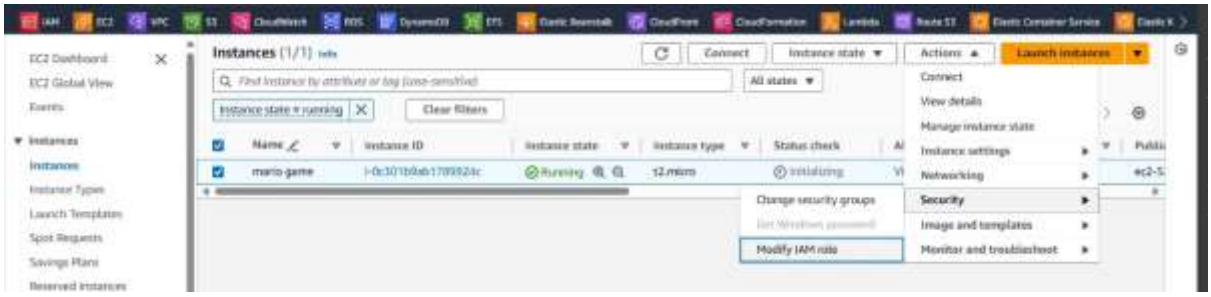
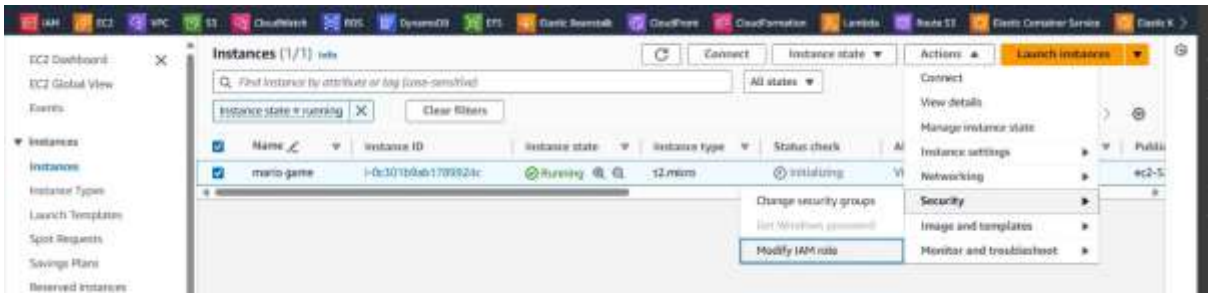
Step 1

- Create an EC2 instance with ubuntu image.
- Create an IAM role for EC2 & give full access.
- Attache the polices (EC2 Admimstratin)







Step2

- Launch the instance
- #sudo apt update

- Sudo su
- Git clone - http://github.com/Aj7Ay/k8s-mario

```
ubuntu@ip-172-31-32-74:~$ sudo su
root@ip-172-31-32-74:/home/ubuntu# git clone https://github.com/awsanuragkadu/k8s-mario.git
Cloning into 'k8s-mario'...
remote: Enumerating objects: 41, done.
remote: Counting objects: 100% (41/41), done.
remote: Compressing objects: 100% (25/25), done.
remote: Total 41 (delta 14), reused 41 (delta 14), pack-reused 0
Receiving objects: 100% (41/41), 10.37 KiB | 1.30 MiB/s, done.
Resolving deltas: 100% (14/14), done.
root@ip-172-31-32-74:/home/ubuntu#
```

- Cd /k8s-mario

```
root@ip-172-31-32-74:/home/ubuntu# ls
k8s-mario
root@ip-172-31-32-74:/home/ubuntu# cd k8s-mario/
root@ip-172-31-32-74:/home/ubuntu/k8s-mario# chmod +x script.sh
root@ip-172-31-32-74:/home/ubuntu/k8s-mario# sh script.sh
```

Step3

- Script.sh (install the some file terraform, awscli kubectl client)
- Docker install docker command
- Use command #apt install docker.io

Step4

Check the all installed file in version

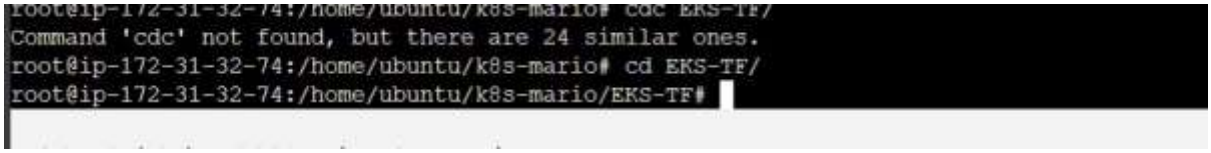
- aws –version
- docker --version
- terraform --version
- kubectl version –client

```
root@ip-172-31-32-74:/home/ubuntu/k8s-mario# aws --version
aws-cli/2.15.35 Python/3.11.8 Linux/6.5.0-1014-aws exe/x86_64.ubuntu.22 prompt/off
root@ip-172-31-32-74:/home/ubuntu/k8s-mario# terraform --version
Terraform v1.7.5
on linux_amd64
root@ip-172-31-32-74:/home/ubuntu/k8s-mario# kubectl version - client
error: extra arguments: [- client]
root@ip-172-31-32-74:/home/ubuntu/k8s-mario# kubectl version -client
error: unknown shorthand flag: 'c' in -client
See 'kubectl version --help' for usage.
root@ip-172-31-32-74:/home/ubuntu/k8s-mario# kubectl version --client
Client Version: v1.29.3
Kustomize Version: v5.0.4-0.20230601165947-6ce0bf390ce3
```

Step 4

Change the directory

- # cd EKE-TF
- Ls



Step5

- Create a s3 bucket. name = Akshay& change the backend file
- & change the region name in the perticuler region

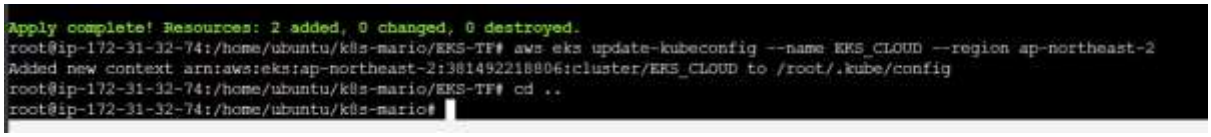
Step 6

- Provider.tf file in the change in region
- & change the region name in the perticuler region

Step 7

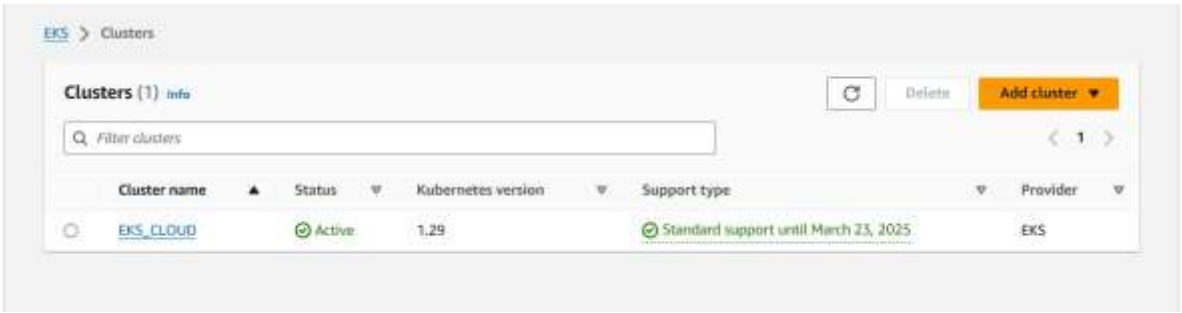
Installation in terafrom command

- Terraform init
- Terraform plan
- Terraform validate
- Terraform apply -auto-approve

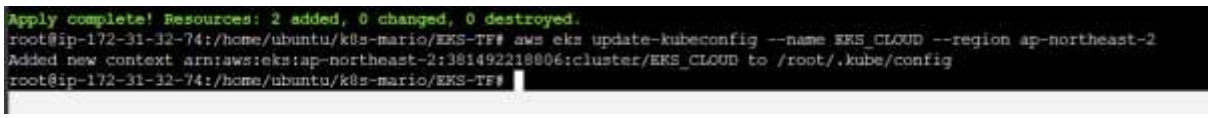


Step 8

- Check the Aws cluster &node the particular region the is create or not



- Update the Kubernetes configuration



- Cd . .

Step 9

Let's apply the deployment and service

Deployment

- ```
  kubectl apply -f deployment.yaml
  #to check the deployment
  kubectl get all
  ```

Now let's apply the service

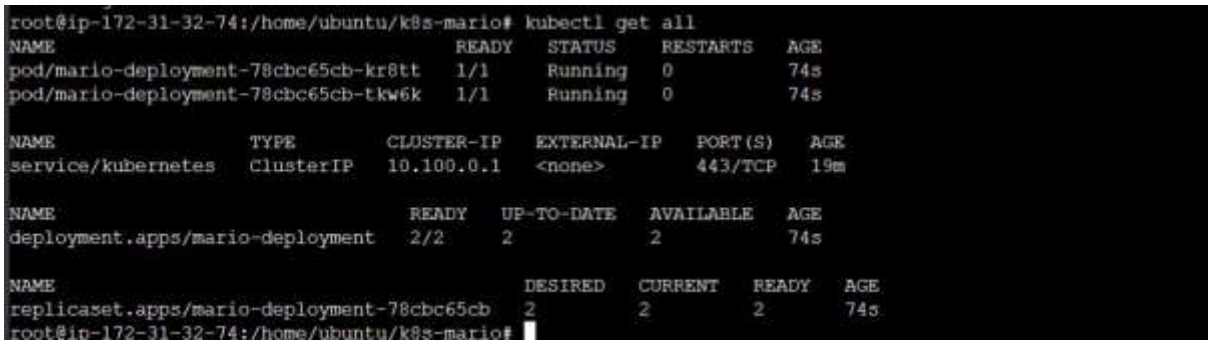
Service

- ```
  kubectl apply -f service.yaml
  kubectl get all
  ```

step 10

Now let's describe the service and copy the LoadBalancer Ingress

- ```
  kubectl describe service mario-service
  ```


  ```

```
NAME                                    DESIRED   CURRENT   READY   AGE
replicaset.apps/mario-deployment-78cbc65cb   2         2         2       108s
root@ip-172-31-32-74:/home/ubuntu/k8s-mario# kubectl describe service mario-service
```

i-0c301b9ab1789924c (mario game)

Step 11

- This loadblancr ingresess link copy & past on browser
- & out put on the game mario

```
IP:                       10.100.52.82
IPs:                      10.100.52.82
LoadBalancer Ingress:     acc7287a0df0646feb2d7be24a8f1d87-1547344463.ap-northeast-2.elb.amazonaws.com
Port:                     <unset>  80/TCP
```

- Oup put
- 

- Remove the services and deployment first
- `kubectl get all`
  `kubectl delete service mario-service`
  `kubectl delete deployment mario-deployment`
- `terraform destroy --auto-approve`