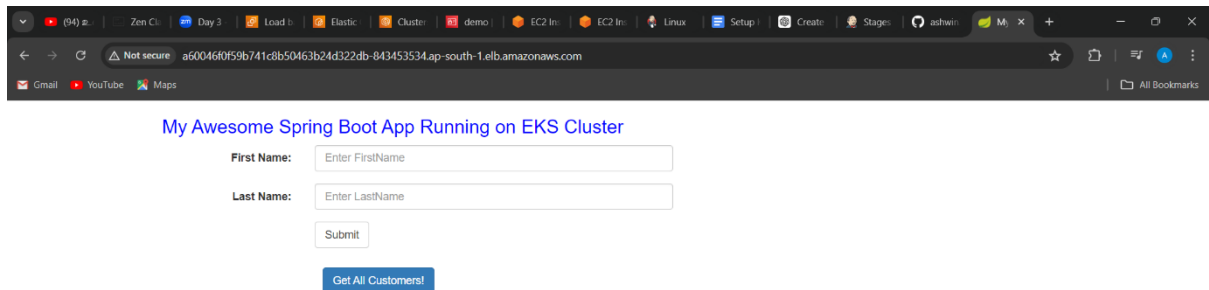


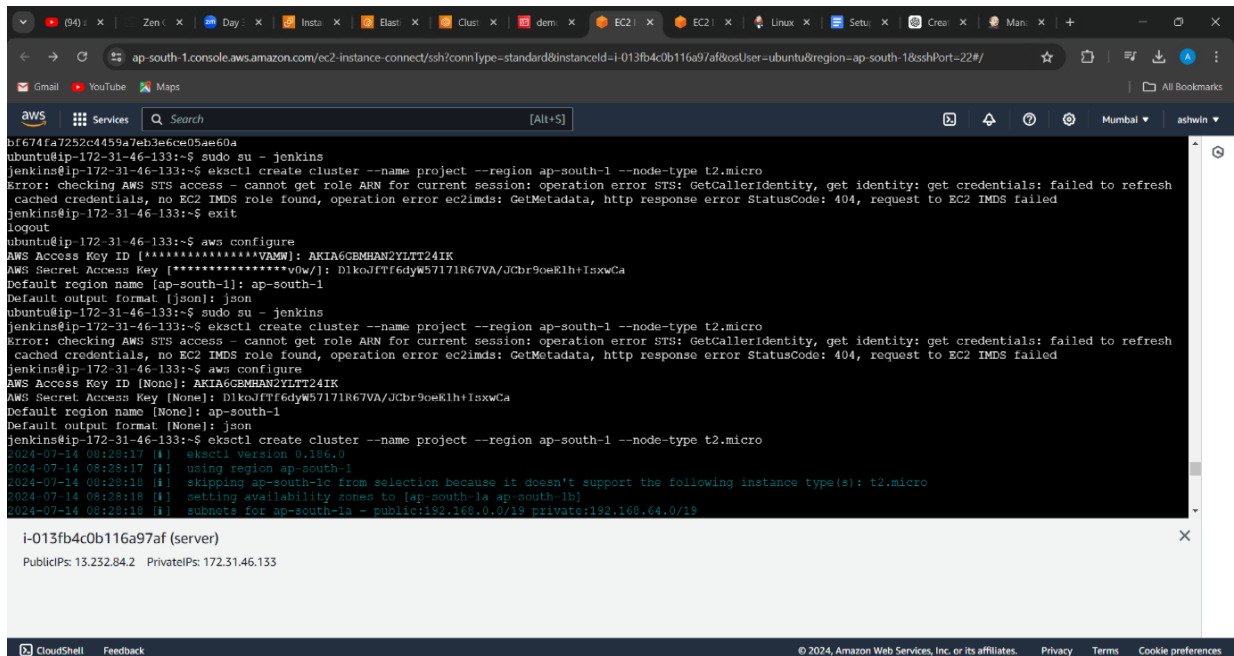
1.github link

<https://github.com/ashwin31081999/EKS-CICD.git>

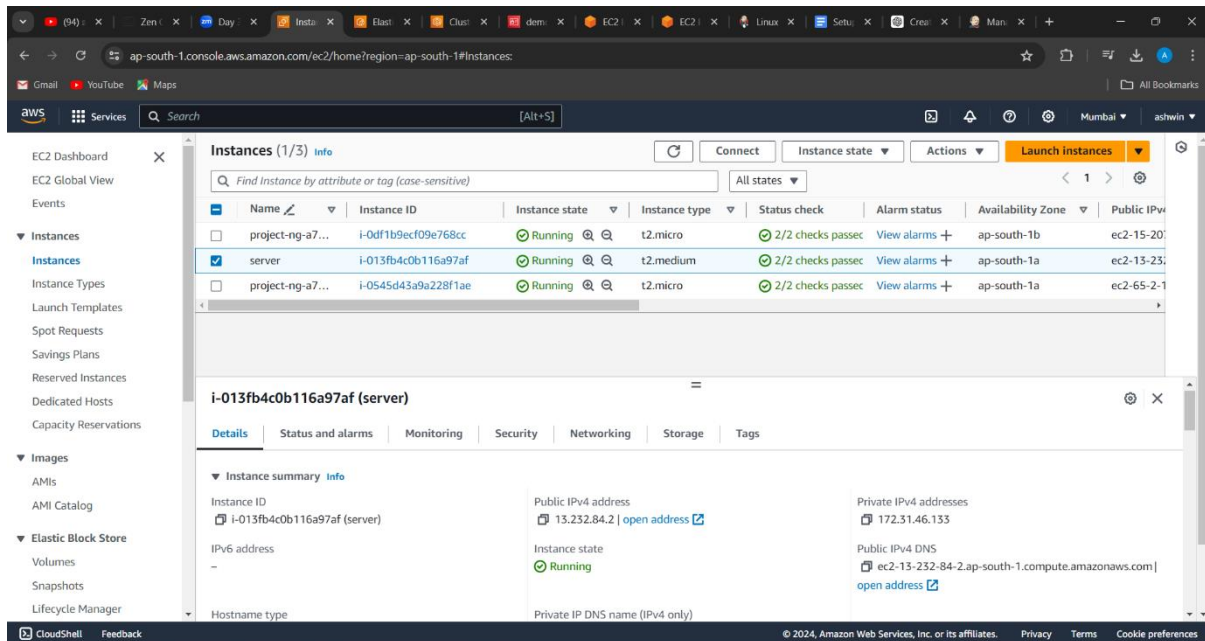
2.application deployed through eks cluster



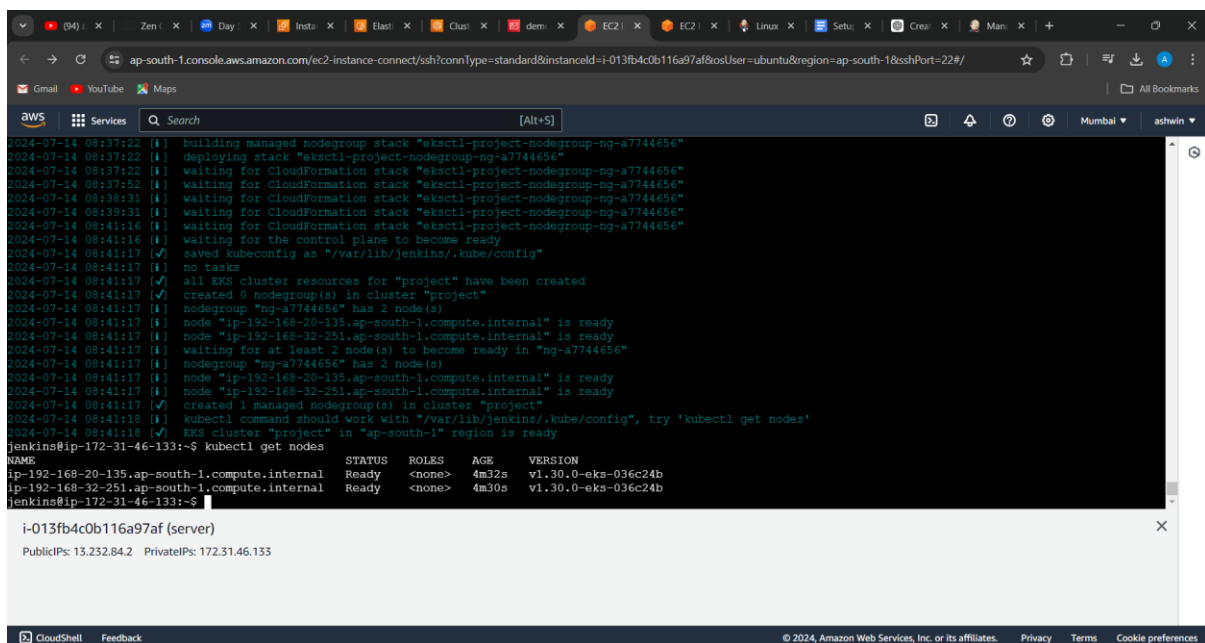
3.configured aws and created a eks cluster in Jenkins user



4.created ec2 master machine and cluster nodes



5.nodes



6.kube-config file

```
jenkins@ip-172-31-46-133:~$ cat /var/lib/jenkins/.kube/config
apiVersion: v1
clusters:
- cluster:
    certificate-authority-data: LS0tLS1CRUdJTiBDRVJUSUZJQ0FURSB0LS0tCk1JSURCVENDQWYyZDZlSUJlZD01JUFBoR3YxK05nUGt3RFFZSkVWklodmNOQVFFTEJRQXDGVEVUTUJFR0ExVUUKQXhNS2
    EzVmlaWEp1WlhSbGN6QWVWdzB5TKRBM01UUXdPREkzTWp0YUz3MhpOREEzTVRjd09ETX1NaK5hTUJVeApFekFSQmdOVkVBTVR8DExQxWW1WeWJtVjBaWE13Z2dFaU1BMEdDU3FHU011MORRRUJBVVVBQTRJQkR3QXdn
    Z0VlckFvSUUBOURGaVZkZcr3GzugjhdW59acGVHcWwcazNFWmptcDhGRHVKT0dkaK9bdGdNaFAvskVhQ1h6cU1LS0tRUTk0U1YyZkYyczRvaJNNetTzp0pkeVZBMnpzMDdLsk9aa3MxtZpQSHNs0maMYXJWVlFYOF
    F0I3dWlpeU00GgoISmR3EzFpYwWY1lva0UzZ2F0dnpZ2lJbEVEVdS9Iez0Uits30xUMpBjR2JHRGQ2ZmWzXmU5anZkU0U1OWZ3Cit1Nm1NBHBRK2p6Zk1RM0dnd3hG045Zmd0bWpU3dGRUxGdWJANndvFREc5
    b3ZhZURZy0hYeWRBMk1QEZ2Yi3ERMOYxVzGxpQUYibkRSV8lTQ31ENESNalBYTWepb1F2cldeQWFFRVJObCs2WjJpWlVocmlGRDhSEFNha2F0G5TKwppeg5XR3F0ZUZhbnE2X102T1jldUNOU2No00fMqWdNkqFBR2
    pXVEJYTUR0R0RkxVWR8dOVL3dR8UF3SUNwREFpckJnTlZlUk1CQWY4RUJQUURBUUgvtU1wR0KxVWR8Z1FXQkRcn1HaW1FWExuM2luanJ2OR1MbTzFVEExN316QVYKQmdOVkhSRUVEakFNZ2dWcmRXSmxjbTbVszZEdW
    ek1BMEdDU3FHU011MORRRUJdd1VBQTRJQkRFRQytYmVnUmpRbWpIVm9zanhxUnVDSVJhd2pBS3FlcEtwT0lqbml1Qnorb0ZKTk3Z3Wx1WwVIMGQ3T0dnb1JnMDRsa0RTKY2NRM3FBcmhnnNV03aTg2ck43dW11WwhaQ2
    ZGtGU2l1hEEFyMjJhGRLcEdYl1nJk3FhbE9DU0U1hY3kwM1VUZFdncW9scm9RMEJGc3VXd0JvSGhYTK56M2dXc2dVdmdSM1ZhrnJRamdtMENSsnE5M3dBRtdqexdDVUNjNCS5QzFQUnMwSFRIsgpSYSTOQUN1OFNO
    ND15VmJYMTREBMGxtZkNYOHVRWGNJbn1qSmNYaDVjUG9CYWszcnQ1VWxvVfduNlVWbU5CeEg3cn13NjUxQ1Exem1Nb2tVNUJEWWh11OWw2dDBVRHFYVUg2Q2dKTj10KzJ2ZzFhT1FyWwgyTmdWU1psMmxYm3QzRUcKMV
    BldmXzZpveFlRC10tLS0tR05EIEENFU1RJRklDQVRFLS0tLS0K
    server: https://8f608c53434a49b0c15d7121E1FFF09B1.gr7.ap-south-1.eks.amazonaws.com
  name: project.ap-south-1.eksctl.io
contexts:
- context:
    cluster: project.ap-south-1.eksctl.io
    user: demo@project.ap-south-1.eksctl.io
  name: demo@project.ap-south-1.eksctl.io
current-context: demo@project.ap-south-1.eksctl.io
kind: Config
preferences: {}
users:
- name: demo@project.ap-south-1.eksctl.io
  user:
```

7.created a secret file in global credentials in Jenkins

13.232.84.2:8080/manage/credentials/

Jenkins

Search (CTRL+K)

admin log out

Dashboard > Manage Jenkins > Credentials

Credentials

T	P	Store	Domain	ID	Name
		System	(global)	K8S	eks-file-new.txt (kube)

Stores scoped to Jenkins

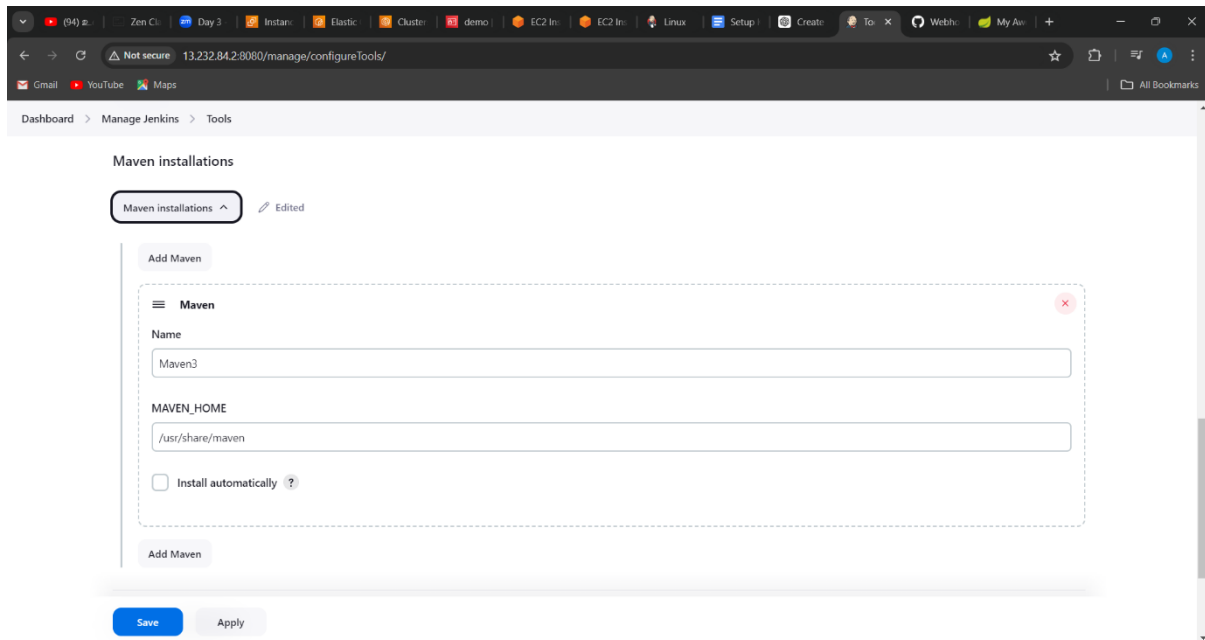
P	Store	Domains
	System	(global)

Icon: S M L

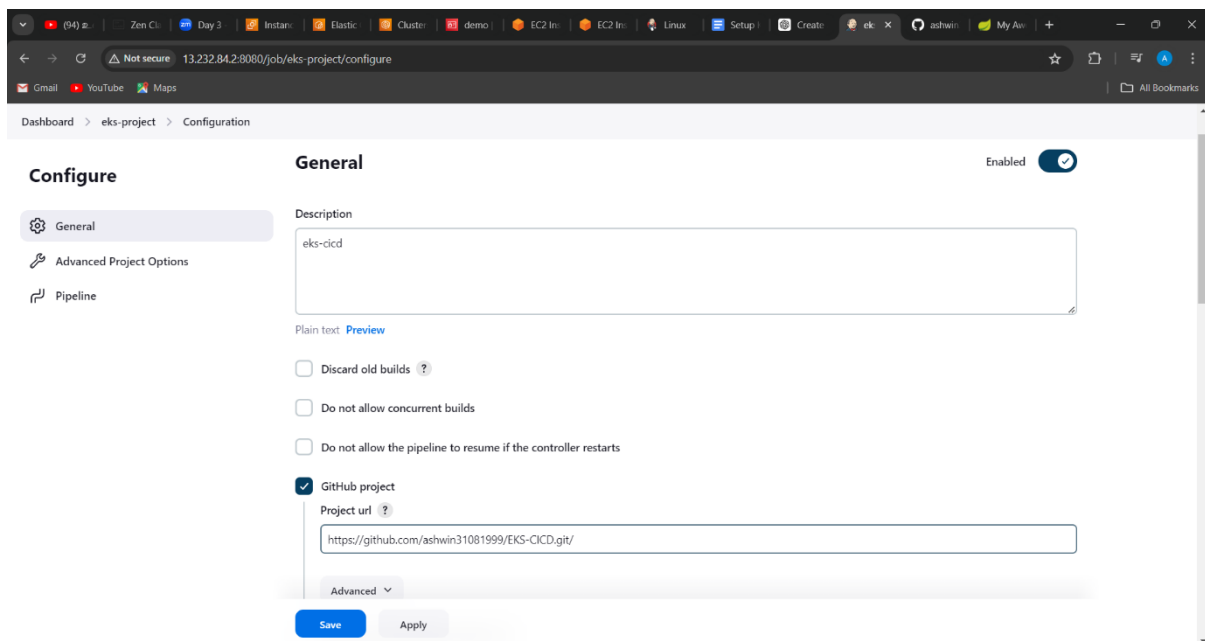
REST API

Jenkins 2.452.3

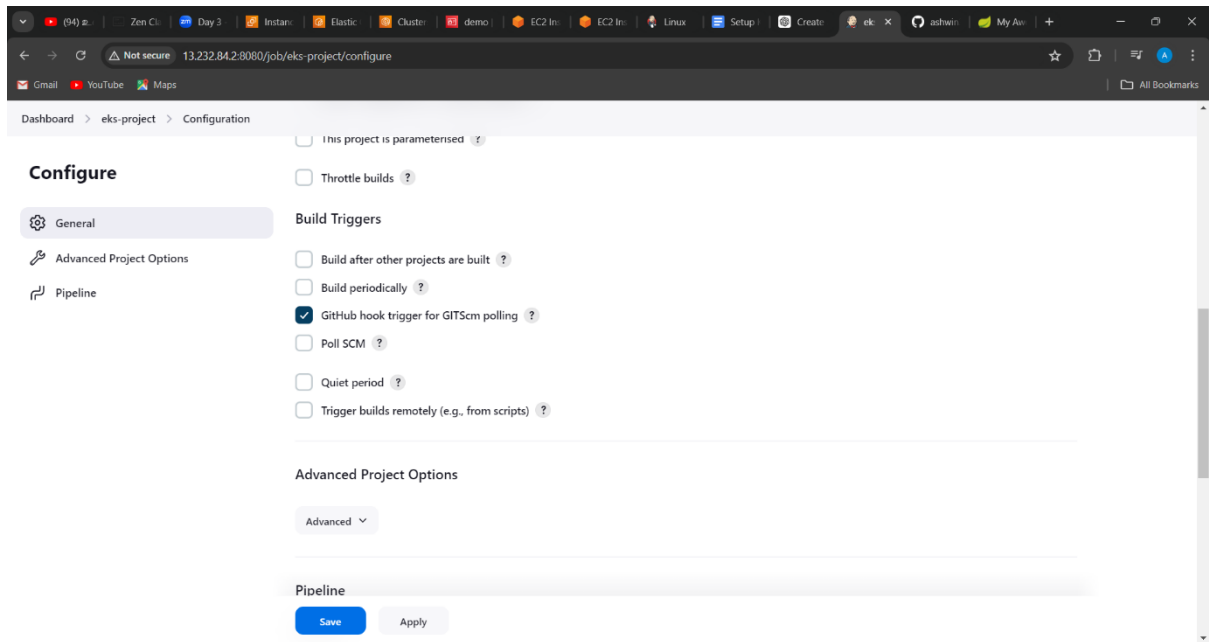
8.created tool configuration maven in jenkins



9.created a job and configuring in Jenkins -1



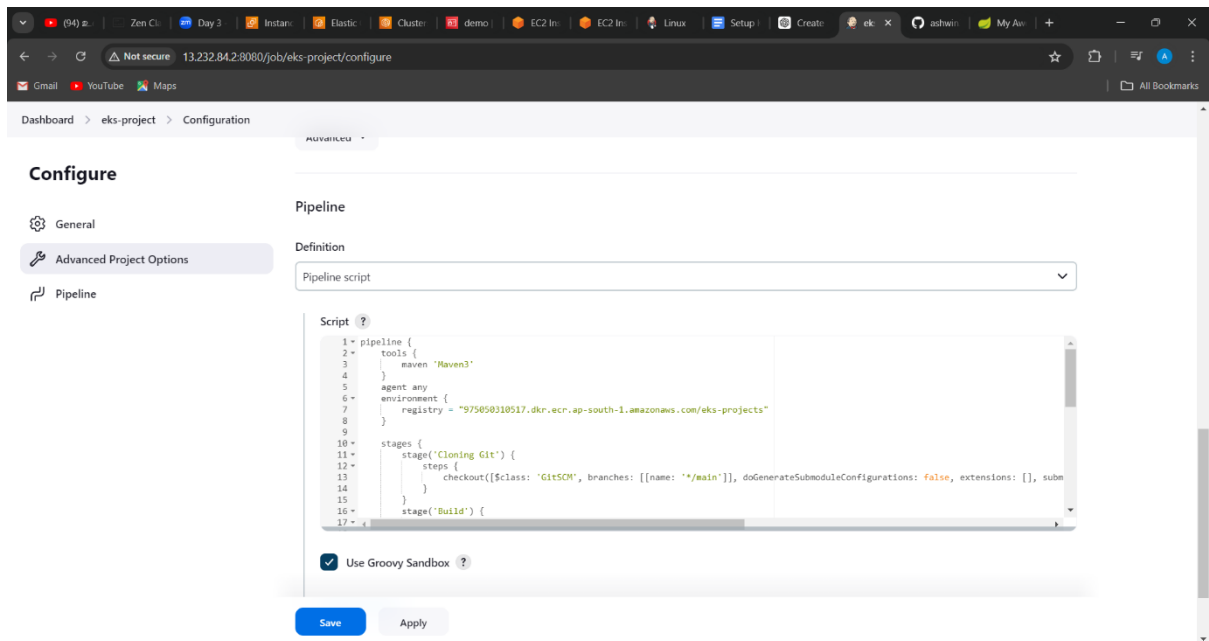
10. created a job and configuring in Jenkins -2



The screenshot shows the Jenkins Configuration page for a job named 'eks-project'. The 'Configure' tab is active, and the 'General' sub-tab is selected. The page includes several configuration sections:

- General:** Includes a checkbox for 'This project is parameterised' and a 'Throttle builds' checkbox.
- Build Triggers:** Includes checkboxes for 'Build after other projects are built', 'Build periodically', 'GitHub hook trigger for GITScm polling' (checked), 'Poll SCM', 'Quiet period', and 'Trigger builds remotely (e.g., from scripts)'.
- Advanced Project Options:** A dropdown menu currently set to 'Advanced'.
- Pipeline:** A section at the bottom with 'Save' and 'Apply' buttons.

11. created a job and configuring in Jenkins -3

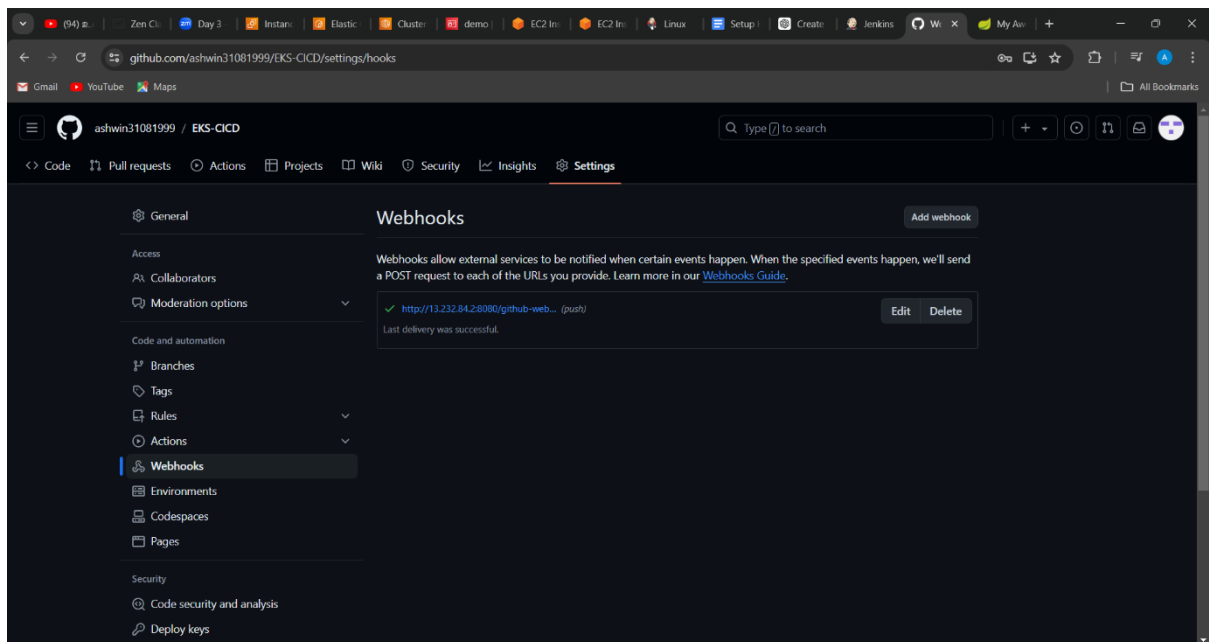


The screenshot shows the same Jenkins Configuration page for 'eks-project', but with the 'Pipeline' sub-tab selected under the 'Configure' tab. The 'Definition' section shows 'Pipeline script' selected in a dropdown menu. Below this, a 'Script' section contains a Groovy pipeline script:

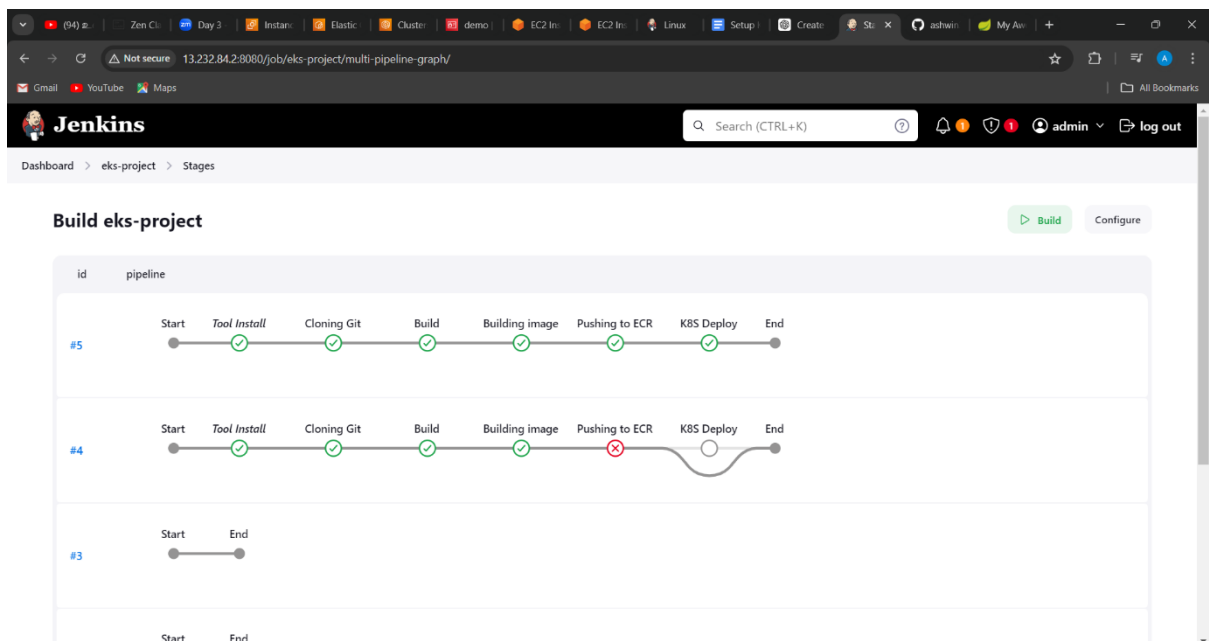
```
1 pipeline {
2   tools {
3     maven 'Haven3'
4   }
5   agent any
6   environment {
7     registry = '97565010517.dkr.ecr.ap-south-1.amazonaws.com/eks-projects'
8   }
9
10  stages {
11    stage('Cloning Git') {
12      steps {
13        checkout([$class: 'GitSCM', branches: [[name: '**/main']], doGenerateSubmoduleConfigurations: false, extensions: [], submodules: []])
14      }
15    }
16    stage('Build') {
17
```

Below the script, the 'Use Groovy Sandbox' checkbox is checked. 'Save' and 'Apply' buttons are at the bottom.

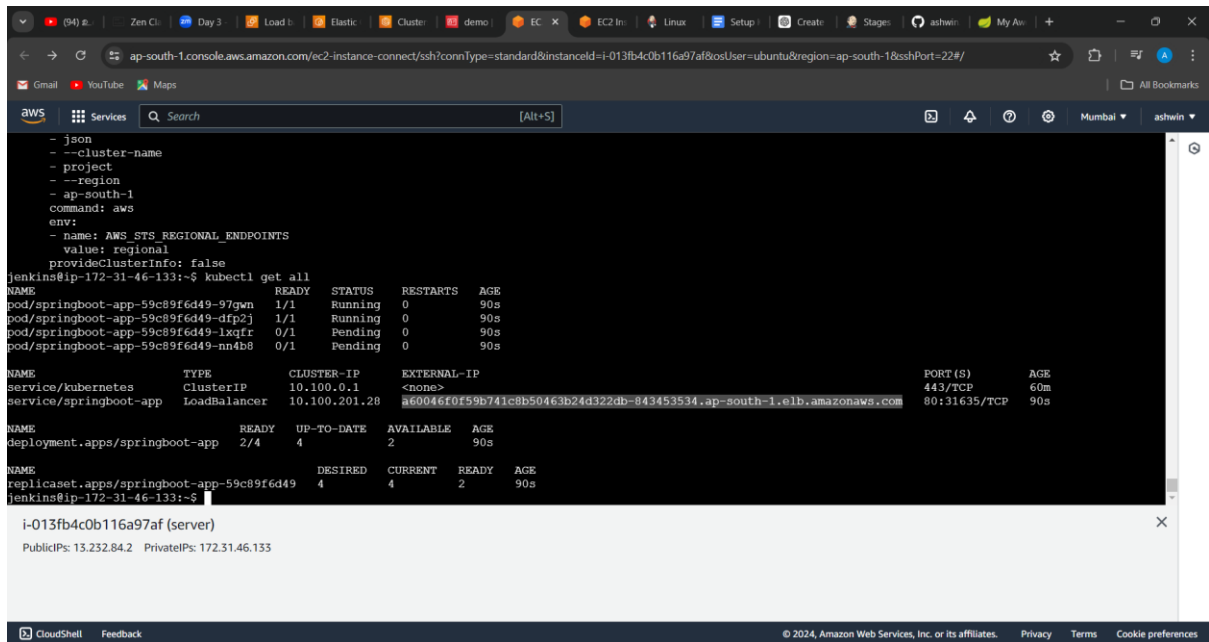
12.configured webhooks in github repository



13.stagging output



14.pods, deployments, services and replicas created.



```
- json
- --cluster-name
- project
- --region
- ap-south-1
command: aws
env:
- name: AWS_STS_REGIONAL_ENDPOINTS
  value: regional
provideClusterInfo: false
jenkins@ip-172-31-46-133:~$ kubectl get all
NAME                                READY   STATUS    RESTARTS   AGE
pod/springboot-app-59c89f6d49-97gwn 1/1     Running   0           90s
pod/springboot-app-59c89f6d49-dfp2j 1/1     Running   0           90s
pod/springboot-app-59c89f6d49-lxqfr 0/1     Pending   0           90s
pod/springboot-app-59c89f6d49-nn4b8 0/1     Pending   0           90s

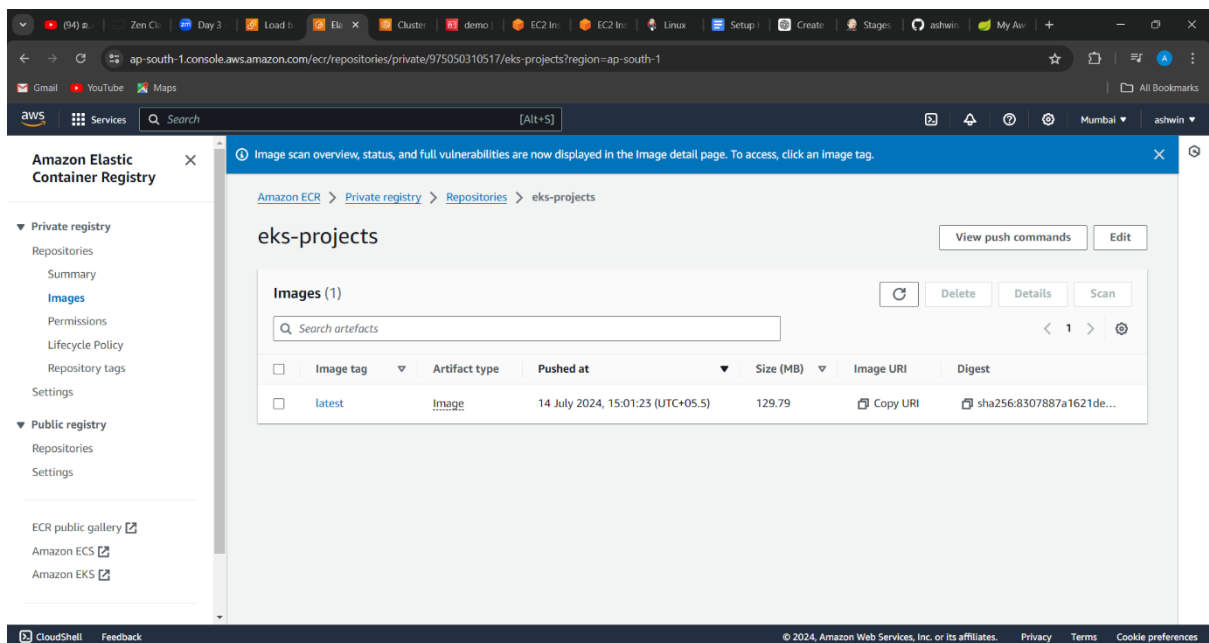
NAME                                TYPE          CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE
service/kubernetes                  ClusterIP     10.100.0.1    <none>         443/TCP          60m
service/springboot-app             LoadBalancer 10.100.201.28 a60046f0f59b741c0b50463b24d322db-843453534.ap-south-1.elb.amazonaws.com 80:31635/TCP    90s

NAME                                READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/springboot-app      2/4     4             2           90s

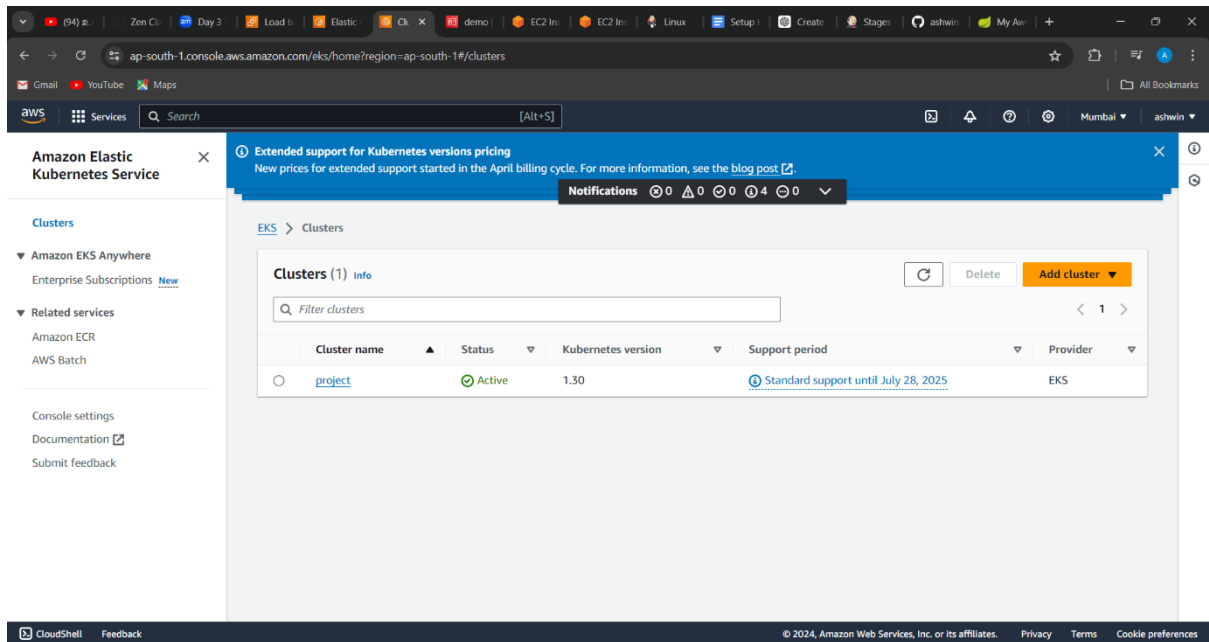
NAME                                DESIRED   CURRENT   READY   AGE
replicaset.apps/springboot-app-59c89f6d49 4         4         2       90s
jenkins@ip-172-31-46-133:~$
```

i-013fb4c0b116a97af (server)
PublicIPs: 13.232.84.2 PrivateIPs: 172.31.46.133

15.created a ECR registry and pushed the image to it.



16.EKS cluster created



The screenshot displays the AWS Management Console for the Amazon Elastic Kubernetes Service (EKS) Clusters page. The interface includes a top navigation bar with the AWS logo, a search bar, and a notification banner about extended support for Kubernetes versions pricing. The left sidebar shows the 'Amazon Elastic Kubernetes Service' menu with options for 'Clusters', 'Amazon EKS Anywhere', 'Enterprise Subscriptions', 'Related services', 'Console settings', 'Documentation', and 'Submit feedback'. The main content area shows the 'Clusters (1)' page with a table listing the cluster 'project'.

Cluster name	Status	Kubernetes version	Support period	Provider
project	Active	1.30	Standard support until July 28, 2025	EKS