ADVANCE DEVOPS EXP 4

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Aim :- To install Kubectl and execute Kubectl commands to manage the Kubernetes cluster and deploy Your First Kubernetes Application

Step 1: As the cluster is up and running, we can deploy our nginx server on this cluster.

```
ubuntu@ip-172-31-91-198:~$ kubectl get nodes
NAME              STATUS   ROLES           AGE     VERSION
ip-172-31-80-216  Ready    <none>          14s     v1.31.1
ip-172-31-91-198  Ready    control-plane   3m35s   v1.31.1
```

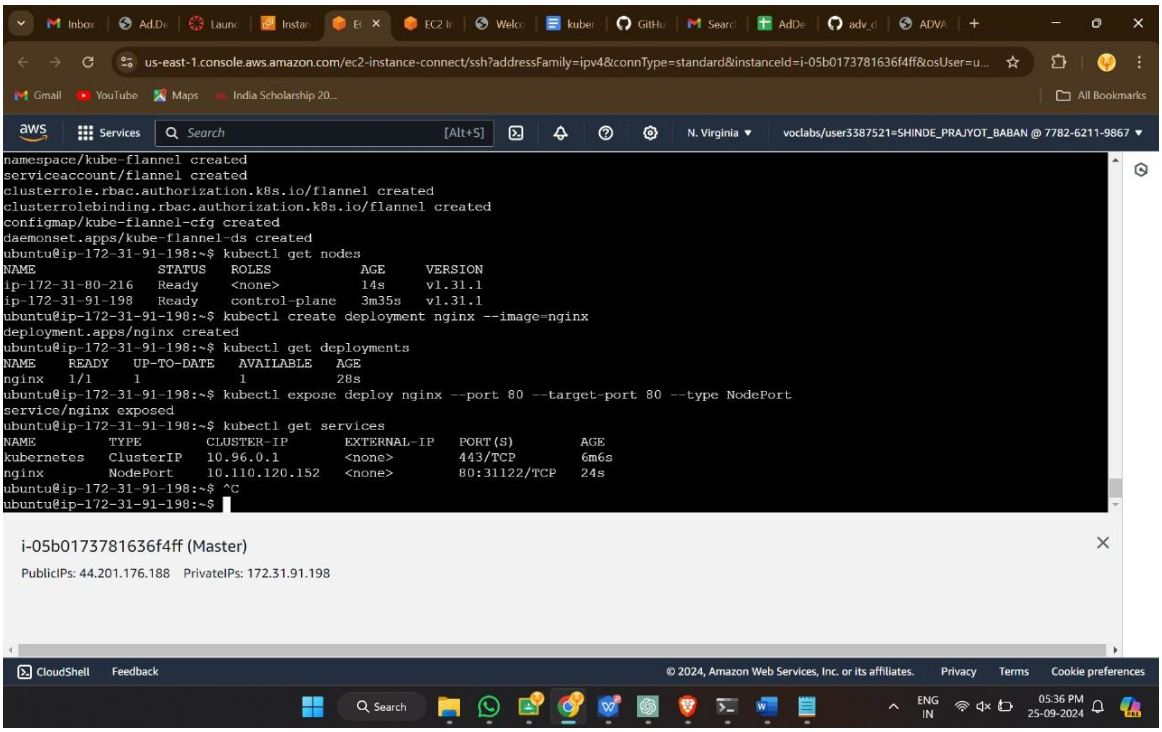
Apply this deployment file using this command to create a deployment.

$kubectl create deployment nginx --image=nginx

```
ubuntu@ip-172-31-91-198:~$ kubectl create deployment nginx --image=nginx
deployment.apps/nginx created
```

Step 2: Verify the deployment using the command:

$kubectl get deployments

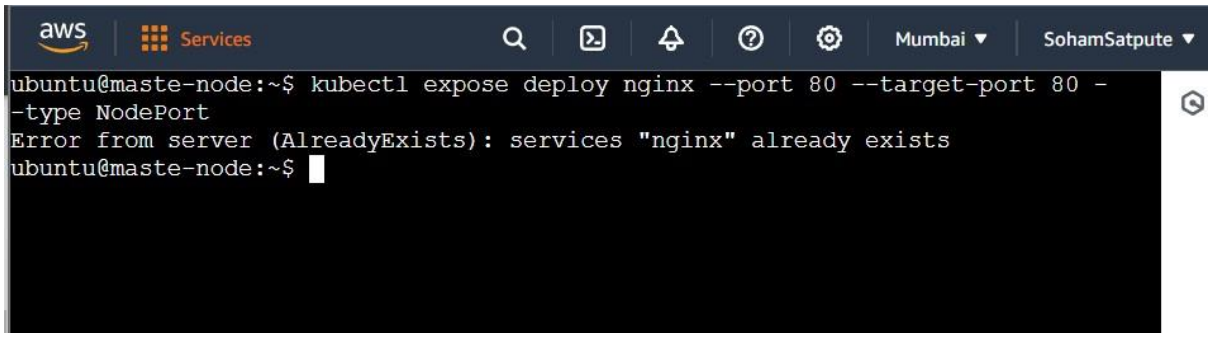


Step 3: Next, run the following command to create a service named nginx that will

expose the app publicly. It will do so through a NodePort, a scheme that will make

the pod accessible through an arbitrary port opened on each node of the clusterwith this servicetype, Kubernetes will assign this service on ports on the **30000+**range.

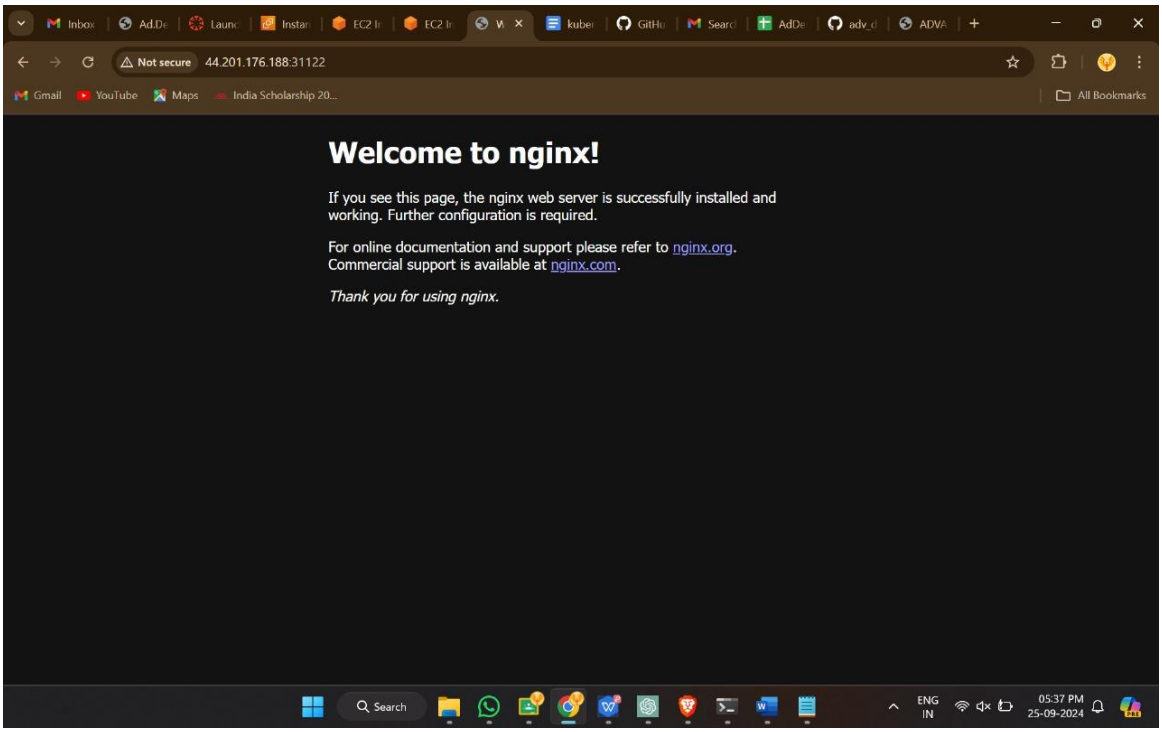
$kubectl expose deploy nginx --port 80 --target-port 80 --type NodePort



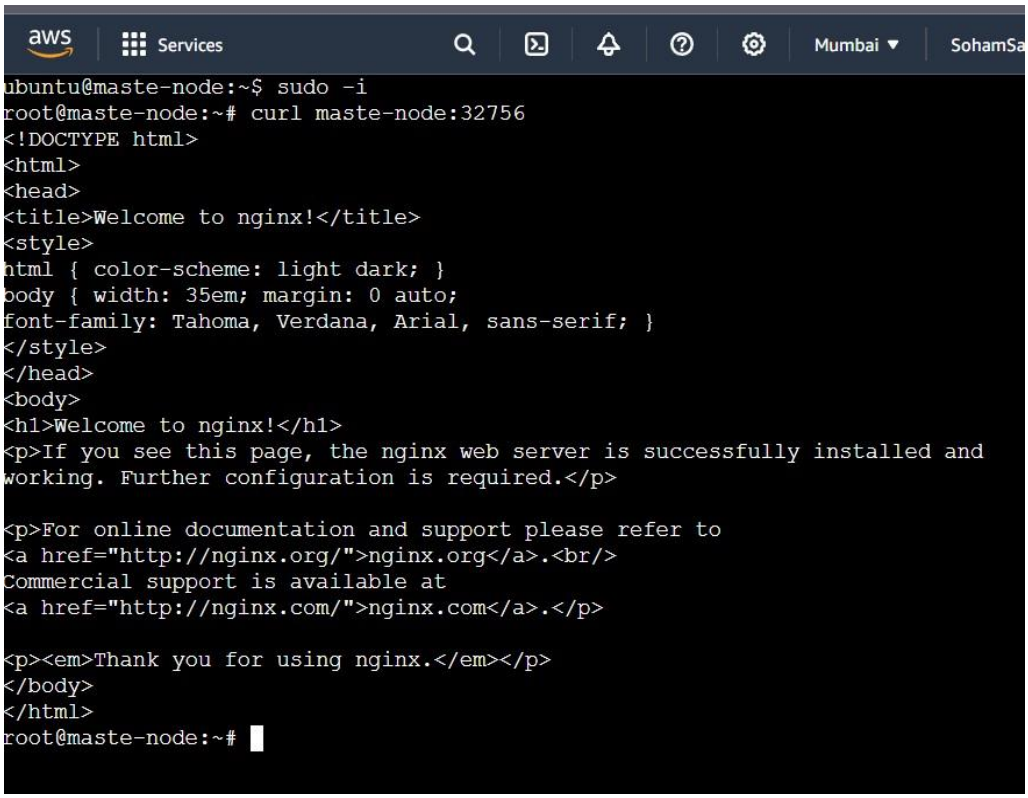
Step 4: Run this command to see a summary of the service and the ports exposed.

$kubectl get services

Step 5: Add the port which is displayed i.e. 32756(in our case) in the inbound rules of the security group.



Step 6: Now you can verify that the Nginx page is reachable on all nodes using thecurl command.As you can see, the "**WELCOME TO NGINX!**" page can be reached.



Step 7: To test that everything is working, visithttp://worker_1_ip:nginx_port or http://worker_2_ip:nginx_port through a browser on your local machine. You will see Nginx's familiar welcomepage.

http://13.127.63.136:32756/