

ASSIGNMENT-8

ROLES CREATED FOR CLUSTER AND WORKER NODES

The screenshot displays the AWS IAM console interface. The left sidebar contains the 'Identity and Access Management (IAM)' menu with options like Dashboard, Access management, Roles, Policies, and Access reports. The main content area shows the 'Roles' page with a notification banner at the top stating 'Role ec2role created'. Below the notification, there is a table listing roles. The table has columns for 'Role name', 'Trusted entities', and 'Last ac...'. The roles listed are 'AWSServiceRoleForAmazonEKS', 'AWSServiceRoleForAmazonEKSNodegroup', and 'AWSServiceRoleForAmazonGuardDuty'. The bottom taskbar shows the Windows taskbar with the time 1:13 PM on 7/14/2022.

Role name	Trusted entities	Last ac...
AWSServiceRoleForAmazonEKS	AWS Service: eks (Service-Linked Role)	6 days ago
AWSServiceRoleForAmazonEKSNodegroup	AWS Service: eks-nodegroup (Service-Linked Role)	6 days ago
AWSServiceRoleForAmazonGuardDuty	AWS Service: guardduty (Service-Linked Role)	

EKS CLUSTER ROLE

The screenshot displays the AWS IAM console interface. The left sidebar contains the 'Identity and Access Management (IAM)' menu with options like Dashboard, Access management, Roles, Policies, and Access reports. The main content area shows the 'Roles' page with a notification banner at the top stating 'Role ekscluster created'. Below the notification, there is a table listing roles. The table has columns for 'Role name', 'Trusted entities', and 'Last ac...'. The roles listed are 'AWSServiceRoleForAmazonEKS', 'AWSServiceRoleForAmazonEKSNodegroup', and 'AWSServiceRoleForAmazonGuardDuty'. The bottom taskbar shows the Windows taskbar with the time 1:17 PM on 7/14/2022.

Role name	Trusted entities	Last ac...
AWSServiceRoleForAmazonEKS	AWS Service: eks (Service-Linked Role)	6 days ago
AWSServiceRoleForAmazonEKSNodegroup	AWS Service: eks-nodegroup (Service-Linked Role)	6 days ago
AWSServiceRoleForAmazonGuardDuty	AWS Service: guardduty (Service-Linked Role)	

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CLUSTER CONFIGURATION

The screenshot shows the 'Configure cluster' step in the AWS Management Console. The left sidebar lists four steps: Step 1: Configure cluster (active), Step 2: Specify networking, Step 3: Configure logging, and Step 4: Review and create. The main content area is titled 'Cluster configuration' and includes the following fields:

- Name:** A text input field containing 'mycluster'.
- Kubernetes version:** A dropdown menu set to '1.22'.
- Cluster service role:** A dropdown menu set to 'ekscluster'.

The bottom of the console shows the Windows taskbar with the system clock at 1:17 PM on 7/14/2022.

CONFIGURATIONS

The screenshot shows the 'Review and create' step in the AWS Management Console. The left sidebar lists four steps: Step 1: Configure cluster, Step 2: Specify networking (active), Step 3: Configure logging, and Step 4: Review and create. The main content area is titled 'Subnets' and includes the following configurations:

- Subnets:** A dropdown menu with three selected subnets: 'subnet-0eb9f1f7082d53dd0', 'subnet-0c49113bd8bc8e50b', and 'subnet-048325c9f6d712219'.
- Security groups:** A dropdown menu with one selected security group: 'sg-09e09a438d0398423'.
- Choose cluster IP address family:** Radio buttons for 'IPv4' (selected) and 'IPv6'.
- Configure Kubernetes service IP address range:** A checkbox that is currently unchecked.

The bottom of the console shows the Windows taskbar with the system clock at 1:18 PM on 7/14/2022.

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PERMISSIONS

The screenshot shows the AWS IAM Management Console in the 'us-east-1' region. The left sidebar displays the 'Identity and Access Management (IAM)' menu with options like Dashboard, Access management, Roles, Policies, Identity providers, Account settings, Access reports, and Credential report. The main content area is titled 'Permissions policies (5)' and shows a list of five AWS managed policies attached to the role. Below the list, there is a section for 'Permissions boundary - (not set)'.

<input type="checkbox"/>	Policy name	Type	Description
<input type="checkbox"/>	AmazonEKSClusterPolicy	AWS managed	This policy provides K...
<input type="checkbox"/>	AmazonEKSWorkerNodePolicy	AWS managed	This policy allows Ama...
<input type="checkbox"/>	AmazonEC2ContainerRegistryReadOnly	AWS managed	Provides read-only acc...
<input type="checkbox"/>	AmazonEKSServicePolicy	AWS managed	This policy allows Ama...
<input type="checkbox"/>	AmazonEKS_CNI_Policy	AWS managed	This policy provides th...

Permissions boundary - (not set)
Set a permissions boundary to control the maximum permissions this role can have. This is not a common setting but can be used to delegate

The screenshot shows the AWS IAM Management Console in the 'us-east-1' region, displaying the 'Summary' page for an IAM role. The left sidebar is the same as the previous screenshot. The main content area is titled 'Summary' and shows the role's creation date, last activity, and ARN. Below the summary, there is a section for 'Permissions policies (1)' showing a single policy attached to the role.

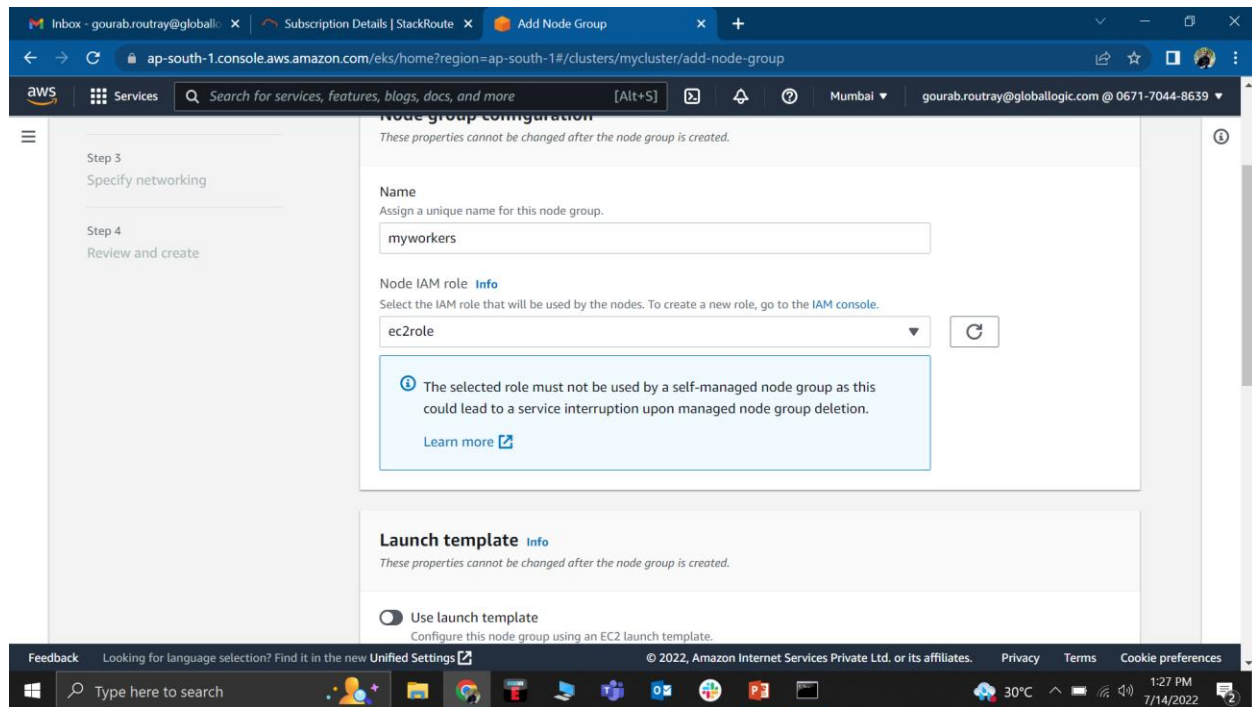
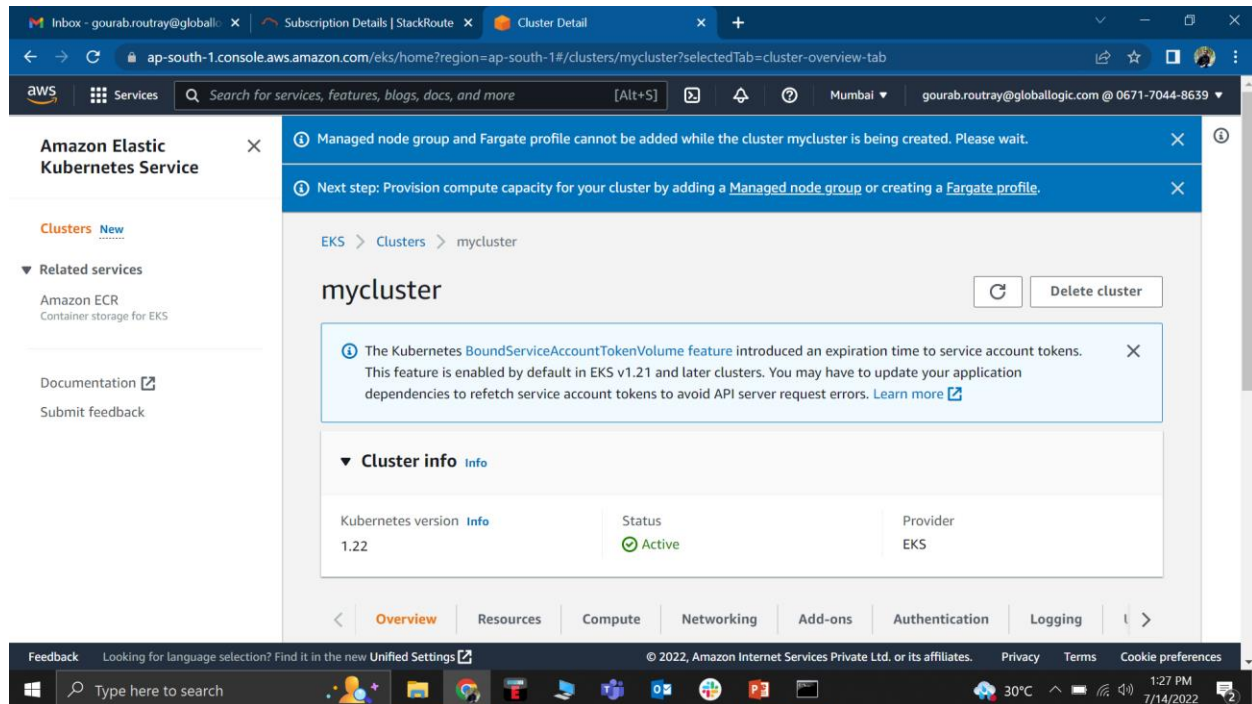
Creation date	ARN
July 14, 2022, 13:18 (UTC+05:30)	arn:aws:iam::067170448639:role/ekscluster

Last activity	Maximum session duration
None	1 hour

<input type="checkbox"/>	Policy name	Type	Description
<input type="checkbox"/>	AmazonEKSClusterPol...	AWS managed	This policy provides Kubernetes the permissions it require...

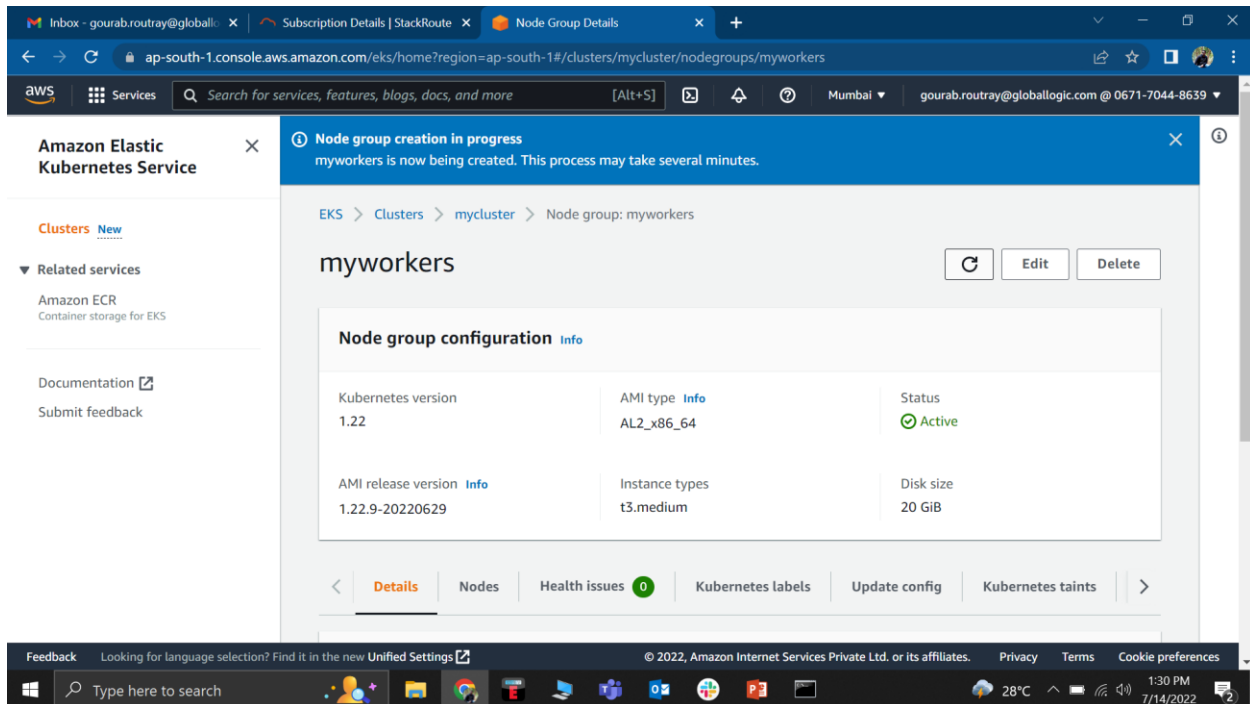
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CLUSTER CREATED

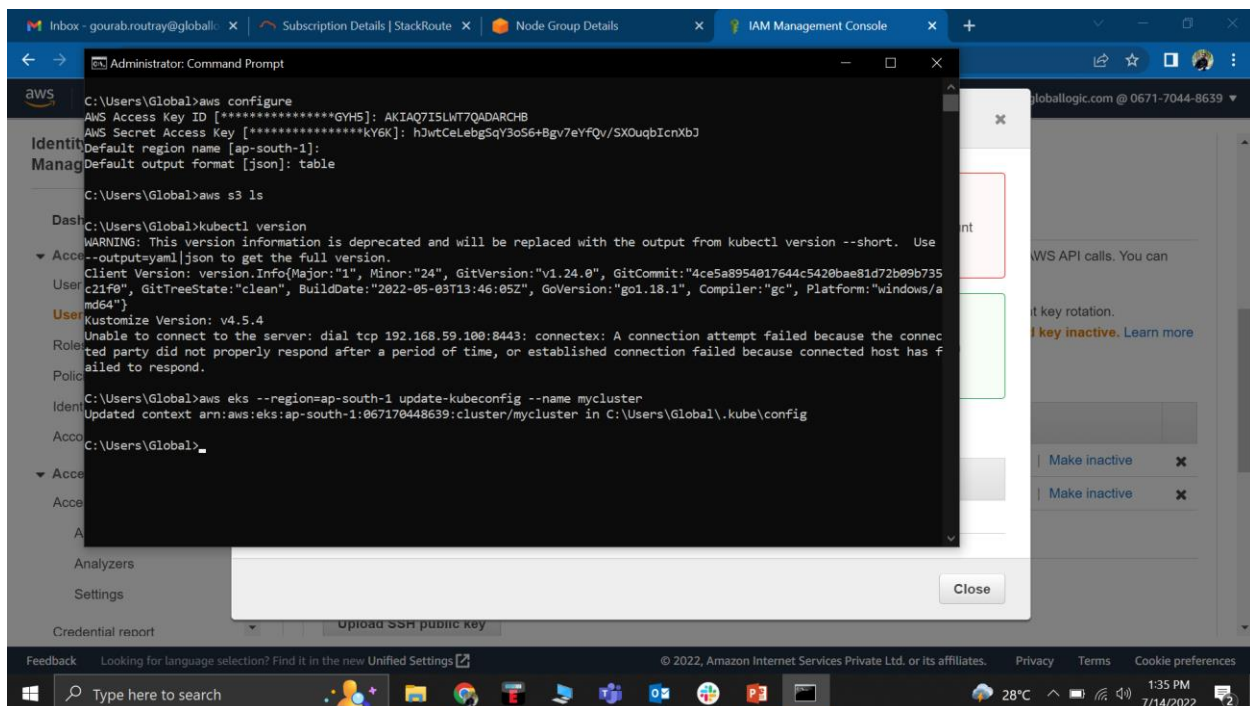


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WORKER NODE CREATED



AWS CONFIGURATION IN CMD



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DEPLOYMENT CREATED AND CONFIGURED

```
Administrator: Command Prompt

C:\Users\Global>kubectl create deployment mydeploys --image=httpd
deployment.apps/mydeploys created

C:\Users\Global>kubectl expose deployment mydeploys --type=LoadBalancer --port=8080
service/mydeploys exposed

C:\Users\Global>
```

```
Administrator: Command Prompt

C:\Users\Global>kubectl get deployments
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
mydeploys     1/1     1            1           8m14s

C:\Users\Global>
```

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```
Administrator: Command Prompt

C:\Users\Global>kubectl get svc
NAME                TYPE                CLUSTER-IP      EXTERNAL-IP      PORT(S)          AGE
hello-node          LoadBalancer        10.109.186.129  <pending>        8080:30166/TCP   22h
kubernetes           ClusterIP            10.96.0.1       <none>           443/TCP          3d2h
mydeploys           LoadBalancer        10.102.63.72    <pending>        8080:31612/TCP   17m
mydeploys-5df9b46458-gch6d LoadBalancer        10.102.17.139   <pending>        80:31618/TCP     115s
mypod               NodePort             10.107.8.170    <none>           80:30016/TCP     4m25s

C:\Users\Global>kubectl get deployments
NAME    READY  UP-TO-DATE  AVAILABLE  AGE
mydeploys  1/1    1           1          17m

C:\Users\Global>kubectl describe service
Name:                hello-node
Namespace:           default
Labels:               app=hello-node
Annotations:          <none>
Selector:             app=hello-node
Type:                 LoadBalancer
IP Family Policy:     SingleStack
IP Families:          IPv4
IP:                  10.109.186.129
IPs:                 10.109.186.129
Port:                 <unset> 8080/TCP
TargetPort:           8080/TCP
NodePort:             <unset> 30166/TCP
Endpoints:            <none>
Session Affinity:     None
External Traffic Policy: Cluster
Events:               <none>

Name:                kubernetes
Namespace:           default
Labels:               component=apiserver
                    provider=kubernetes
Annotations:          <none>
Selector:             <none>
Type:                 ClusterIP
IP Family Policy:     SingleStack
```