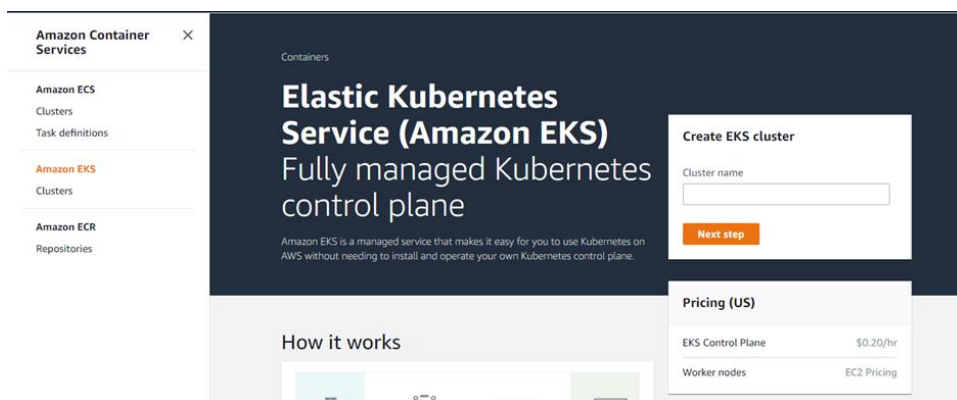
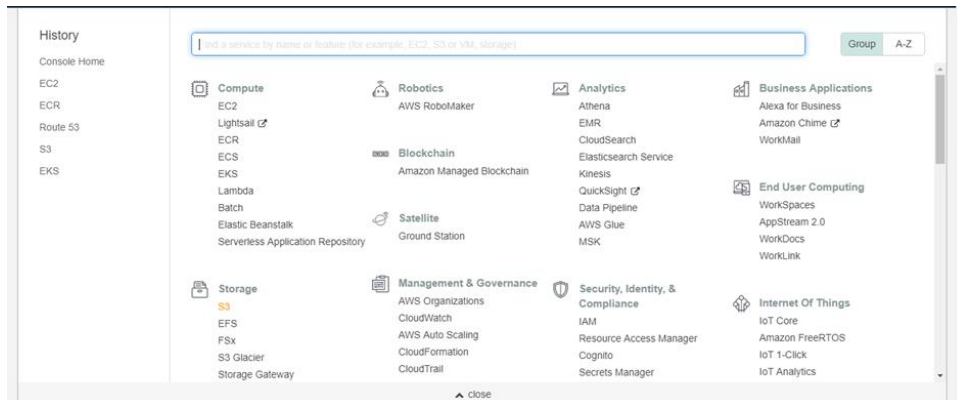


5.2 Install Kubernetes on Cloud

Connect to AWS console and navigate to EKS service to create an EKS cluster



Configure **Role name** used by EKS rest.

[Role name](#)


Select the IAM Role to allow Amazon EKS and the Kubernetes control plane to manage AWS resources on your behalf.


Click on **Create Role** and provide the policy details. Select **EKS** from the service list.


Create role


1234

Select type of trusted entity

 **AWS service**
EC2, Lambda and others

 **Another AWS account**
Belonging to you or 3rd party

 **Web identity**
Cognito or any OpenID provider

 **SAML 2.0 federation**
Your corporate directory

Allows AWS services to perform actions on your behalf. [Learn more](#)

Choose the service that will use this role

EC2
Allows EC2 instances to call AWS services on your behalf.

Lambda
Allows Lambda functions to call AWS services on your behalf.

API Gateway	Comprehend	ElastiCache	Lex	SMS
AWS Backup	Config	Elastic Beanstalk	License Manager	SNS
AWS Support	Connect	Elastic Container Service	Machine Learning	SWF
Amplify	DMS	Elastic Transcoder	Macie	SageMaker

Create role

1234



▼ Attached permissions policies

The type of role that you selected requires the following policy.

Filter policies ▼

Q Search

Showing 2 results

Policy name ▼	Used as	Description
▶  AmazonEKSClusterPolicy	None	This policy provides Kubernetes the permissio...
▶  AmazonEKSServicePolicy	None	This policy allows Amazon Elastic Container S...

Create role

1234

Review

Provide the required information below and review this role before you create it.

Role name*

EKSRoleName

Use alphanumeric and '+', '@', '-', '_' characters. Maximum 64 characters.

Role description


Allows EKS to manage clusters on your behalf.


Maximum 1000 characters. Use alphanumeric and '+', '@', '-', '_' characters.

Trusted entities

AWS service: eks.amazonaws.com

Policies

 AmazonEKSClusterPolicy [↗](#)

 AmazonEKSServicePolicy [↗](#)

* Required

Cancel

Previous

Create role

Select the newly created role name from the list while creating the EKS cluster

General configuration

Cluster name
Enter a unique name for your Amazon EKS cluster.

Kubernetes Version
Select the Kubernetes version to install.

1.13 ▼

Role name [?](#)
Select the IAM Role to allow Amazon EKS and the Kubernetes control plane to manage AWS resources on your behalf.

EKSRoleName ▼

Cluster creation initiated

EKS > Clusters > KubernetesCluster

KubernetesCluster Refresh Update cluster version Delete

General configuration

Kubernetes Version 1.13	Platform Version eks.2	Status CREATING
API server endpoint ?	Certificate authority ?	
Cluster ARN ? arn:aws:eks:us-east-1:374850726220:cluster/KubernetesCluster	Role ARN ? arn:aws:iam::374850726220:role/EKSRoleName	

EKS > Clusters

Clusters (1) Refresh Delete Create cluster

	Cluster name	Kubernetes Version	Status
<input type="radio"/>	KubernetesCluster	1.13	ACTIVE

wget <https://amazon-eks.s3-us-west-2.amazonaws.com/1.10.3/2018-07-26/bin/linux/amd64/kubectl>

chmod +x kubectl

./kubectl

```

root@ip-172-31-17-73:~# wget https://amazon-eks.s3-us-west-2.amazonaws.com/1.10.3/2018-07-26/bin/linux/amd64/kubectl
--2019-07-28 02:03:07-- https://amazon-eks.s3-us-west-2.amazonaws.com/1.10.3/2018-07-26/bin/linux/amd64/kubectl
Resolving amazon-eks.s3-us-west-2.amazonaws.com (amazon-eks.s3-us-west-2.amazonaws.com)... 52.218.253.45
Connecting to amazon-eks.s3-us-west-2.amazonaws.com (amazon-eks.s3-us-west-2.amazonaws.com)|52.218.253.45|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 54146532 (52M) [binary/octet-stream]
Saving to: 'kubectl'

kubectl
100%[=====] 51.64M 7.89MB/s

2019-07-28 02:03:14 (7.41 MB/s) - 'kubectl' saved [54146532/54146532]

root@ip-172-31-17-73:~# ./kubectl
-bash: ./kubectl: Permission denied
root@ip-172-31-17-73:~# chmod +x kubectl
root@ip-172-31-17-73:~# ./kubectl
Kubectl controls the Kubernetes cluster manager.

Find more information at: https://kubernetes.io/docs/reference/kubectl/overview/

```

mkdir bin

cp ./kubectl \$HOME/bin/kubectl && export PATH=\$HOME/bin:\$PATH

kubectl version

kubectl version --short --client

```

root@ip-172-31-17-73:~# mkdir bin
root@ip-172-31-17-73:~# cp ./kubectl $HOME/bin/kubectl && export PATH=$HOME/bin:$PATH
root@ip-172-31-17-73:~# kubectl version
Client Version: version.Info{Major:"1", Minor:"10", GitVersion:"v1.10.3", GitCommit:"2bba6
-26T20:40:11Z", GoVersion:"go1.9.3", Compiler:"gc", Platform:"linux/amd64"}

```

wget <https://amazon-eks.s3-us-west-2.amazonaws.com/1.10.3/2018-07-26/bin/linux/amd64/aws-iam-authenticator>

chmod +x ./aws-iam-authenticator

cp ./aws-iam-authenticator \$HOME/bin/aws-iam-authenticator && export PATH=\$HOME/bin:\$PATH

aws-iam-authenticator help

```

root@ip-172-31-17-73:~# wget https://amazon-eks.s3-us-west-2.amazonaws.com/1.10.3/2018-07-26/bin/linux/amd64/aws-iam-authenticator
--2019-07-28 02:11:02-- https://amazon-eks.s3-us-west-2.amazonaws.com/1.10.3/2018-07-26/bin/linux/amd64/aws-iam-authenticator
Resolving amazon-eks.s3-us-west-2.amazonaws.com (amazon-eks.s3-us-west-2.amazonaws.com)... 52.218.193.153
Connecting to amazon-eks.s3-us-west-2.amazonaws.com (amazon-eks.s3-us-west-2.amazonaws.com)|52.218.193.153|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 26349462 (25M) [binary/octet-stream]
Saving to: 'aws-iam-authenticator'

aws-iam-authenticator
100%[=====]

2019-07-28 02:11:05 (9.03 MB/s) - 'aws-iam-authenticator' saved [26349462/26349462]

root@ip-172-31-17-73:~# chmod +x ./aws-iam-authenticator
root@ip-172-31-17-73:~# cp ./aws-iam-authenticator $HOME/bin/aws-iam-authenticator && export PATH=$HOME/bin:$PATH
root@ip-172-31-17-73:~# aws-iam-authenticator help
A tool to authenticate to Kubernetes using AWS IAM credentials

```

Access keys

Use access keys to make secure REST or HTTP Query protocol requests to AWS service APIs. For your protection, you should never share your secret keys with anyone. As a best practice, we recommend frequent key rotation. [Learn more](#)

Create access key

Access key ID	Created	Last used	Status	
AKIAVORWYFFGC3WVPNWC	2019-07-24 08:28 UTC+0530	2019-07-26 13:51 UTC+0530 with sts in us-east-1	Active	Make inactive ✖

Create access key

Access key ID	Created	Last used	Status	
AKIAVORWYFFGC3WVPNWC	2019-07-24 08:28 UTC+0530	2019-07-26 13:51 UTC+0530 with sts in us-east-1	Active	Make inactive ✖
AKIAVORWYFFGE3YTFZFZ	2019-07-28 07:49 UTC+0530	N/A	Active	Make inactive ✖

Configure AWS CLI and provide **Access Keys** and **Secret Access Keys** while configuring it.

```
root@ip-172-31-17-73:~# aws configure
AWS Access Key ID [None]: AKIAVORWYFFGE3YTFZFZ
AWS Secret Access Key [None]: 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
Default region name [None]: us-east-1
Default output format [None]: json
root@ip-172-31-17-73:~#
```

awseks --region us-east-1 update-kubeconfig --name KubernetesCluster

kubectl get svc

```
root@ip-172-31-17-73:~# aws eks --region us-east-1 update-kubeconfig --name KubernetesCluster
Updated context arn:aws:eks:us-east-1:374850726220:cluster/KubernetesCluster in /root/.kube/config
root@ip-172-31-17-73:~# kubectl get svc
NAME          TYPE          CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
kubernetes    ClusterIP     10.100.0.1    <none>         443/TCP    32m
root@ip-172-31-17-73:~#
```