EKS

EKS

An Amazon EKS cluster consists of two primary components:

The Amazon EKS control plane

Amazon EKS nodes that are registered with the control plane

The Amazon EKS control plane consists of control plane nodes that run the Kubernetes software, such as etcd and the Kubernetes API server. The control plane runs in an account managed by AWS, and the Kubernetes API is exposed via the Amazon EKS endpoint associated with your cluster. Each Amazon EKS cluster control plane is single-tenant and unique, and runs on its own set of Amazon EC2 instances.

All of the data stored by the etcd nodes and associated Amazon EBS volumes is encrypted using AWS KMS. The cluster control plane is provisioned across multiple Availability Zones and fronted by an Elastic Load Balancing Network Load Balancer. Amazon EKS also provisions elastic network interfaces in your VPC subnets to provide connectivity from the control plane instances to the nodes (for example, to support kubectl exec logs proxy data flows).

Runs and scales the Kubernetes control plane across multiple AWS Availability Zones to ensure high availability.

Automatically scales control plane instances based on load, detects and replaces unhealthy control plane instances, and it provides automated version updates and patching for them.

Is integrated with many AWS services to provide scalability and security for your applications, including the following capabilities:

Amazon ECR for container images

Elastic Load Balancing for load distribution

IAM for authentication

Amazon VPC for isolation

CREATE A VPC

STEP-1: ROLE CREATION

IAM — > ROLES — > AWS SERVICE — > USECASE : EKS —> ELS CLUSTER

NEXT — > NEXT — > NAME — > CREATE ROLE

STEP-1: CLUSTERCREATION

EKS — > CREATE — > NAME — > ROLE — > NEXT — > VPC

CLUSER ENDPOINT : PUBLIC & PRIVATE — > SG —> NEXT

NEXT — > CREATE

Will take 5 to 10 min

CREATYE EC2 INSTANCE & INSTALL AWS CLI, KUBECTL AS NORMAL

Aws eks list-clusters

To access the cluster we need to give below command

aws eks update-kubeconfig --name EKSRAHAM --region us-east-1

To see cluster info and configuration

cat /home/ec2-user/ .kube/config

kubectl get nodes

You can’t get nodes to get nodes

IAM — > ROLES — > CREATE — > EC2 — > NEXT — > SELECT ALL BELOW

AmazonEKSWorkerNodePolicy & AmazonEKS\_CNI\_Policy & AmazonEC2ContainerRegistryReadOnly

NEXT — > NAME: WORKER — > CREATE

GO TO EKS CLUSTER ON AWS — > SELECT — > COMPUTE — > ADD NODE GROUP— >

NAME — > ROLE (GIVE WORKER NODE ROLE) — > NEXT — > NEXT — > NEXT & CREATE

WAIT FOR FEW MINUTES