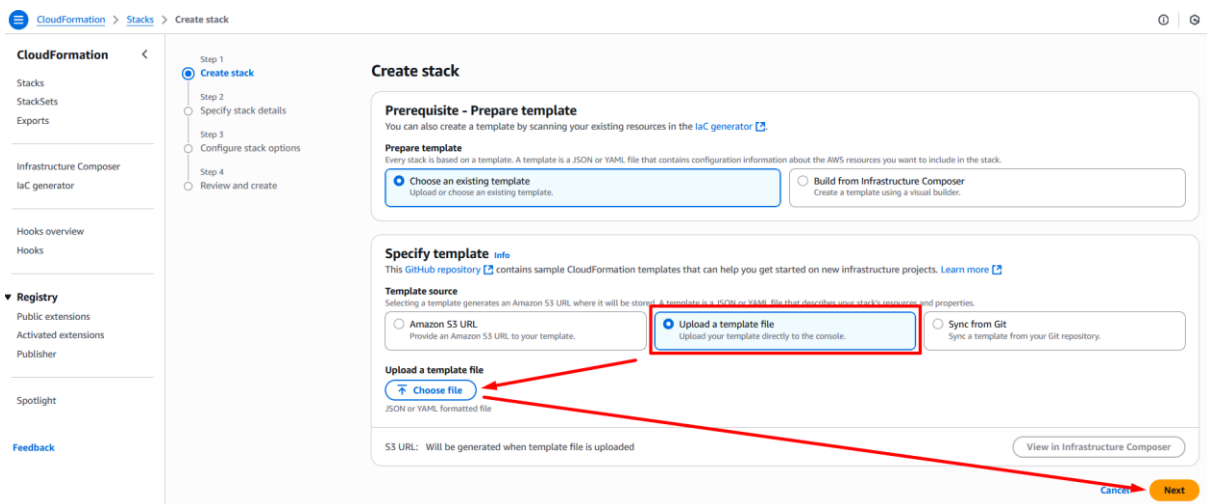# How to Create EKS Cluster by using CloudFormation

Step 1: Login to AWS console and go to CloudFormation.
Step 2: Click on "Create Stack".

Step 3: Upload the YML template file and click on the "Next" button.

Step 4: Provide the necessary stack details:

Step 1
Create stack

Step 2
Specify stack details

Step 3
Configure stack options

Step 4
Review and create

Specify stack details

Provide a stack name

Stack name   1

Enter a stack name

Stack name must contain only letters (a-z, A-Z), numbers (0-9), and hyphen (-) and start with a letter. Max 128 characters. Character count: 0/128.

Parameters

Parameters are defined in your template and allow you to input custom values when you create or update a stack.

ClusterName
The name of the EKS cluster

aiv-cluster

DBAllocatedStorage
The allocated storage in GB

20

DBEngineVersion
PostgreSQL engine version

16.4

DBInstanceClass
The database instance type

db.t4g.medium

DBInstanceIdentifier
The DB instance identifier

DBInstanceIdentifier
The DB instance identifier

aiv-eks

DBName
The database name

Enter String

DBPassword   2
The database admin password

Enter String

DBUsername
The database admin username

eksAdmin

ExistingVpcId   3
ID of the existing VPC

Select AWS::EC2::VPC::Id

KeyPairName   4
Name of an existing EC2 KeyPair to enable SSH access

Select AWS::EC2::KeyPair::KeyName

KubernetesVersion
Kubernetes version for the EKS cluster

1

NodeGroupMaxSize
Maximum number of worker nodes

1

NodeGroupMinSize
Minimum number of worker nodes

1

NodeInstanceType
EC2 instance type for worker nodes

t3.medium

NodeVolumeSize   5
Worker node volume size in GB

20

PrivateSubnetIds   6
List of private subnet IDs for RDS

Select List<AWS::EC2::Subnet::Id>

SubnetIds   7
List of subnet IDs for EKS (at least two across AZs)

Select List<AWS::EC2::Subnet::Id>

Cancel   Previous   Next

Provide all the details:

1. Stack Name: You can any name for stack
2. DB Password: Provide a strong DB Password for Admin user.
3. ExistingVPC ID: Select your existing VPC ID.
4. KeyPair Name: Provide a key pair name if you want to enable SSH login on nodes.
5. Node Volume Size: Provide required disk size, default is 20GiB.
6. Private Subnet IDs: If you want to create private EKS cluster only.
7. Subnet IDs: select at least 2 public subnet IDs.

Click on the create button and it will take around 30 minutes to 60 minutes.

Step 5: Once the cluster is created, you can configure the cluster access on any machine.

A. Use AWS Key and configure the AWS CLI.
B. Run the below command to configure the cluster access.

eksctl utils write-kubeconfig --cluster=<cluster name> --region=<AWS region>