

IAM Role Configuration for AWS EBS CSI Driver on EKS

Step 1: Enable IAM OIDC Provider

```
eksctl utils associate-iam-oidc-provider \
  --region <region> \
  --cluster <cluster-name> \
  --approve
```

Step 2: Create IAM Policy for the EBS CSI Driver

```
curl -O https://raw.githubusercontent.com/kubernetes-sigs/aws-ebs-csi-driver/master/docs/example-iam-policy.json
```

```
aws iam create-policy \
  --policy-name AmazonEKS_EBS_CSI_Driver_Policy \
  --policy-document file://ebs-csi-policy.json
```

Step 3: Create IAM Role with Trust Relationship

```
eksctl create iamserviceaccount \
  --cluster <cluster-name> \
  --region <region> \
  --namespace kube-system \
  --name ebs-csi-controller-sa \
  --attach-policy-arn arn:aws:iam::<account-id>:policy/AmazonEKS_EBS_CSI_Driver_Policy \
  --approve \
  --role-only
```

Alternative Trust Policy JSON

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Principal": {
        "Federated": "arn:aws:iam::<account-id>:oidc-provider/oidc.eks.<region>.amazonaws.com/id/<oidc-id>"
      },
      "Action": "sts:AssumeRoleWithWebIdentity",
      "Condition": {
        "StringEquals": {
          "oidc.eks.<region>.amazonaws.com/id/<oidc-id>:sub": "system:serviceaccount:kube-system:ebs-csi-controller-sa"
        }
      }
    }
  ]
}
```

Step 4: Deploy the AWS EBS CSI Driver

```
kubectl apply -k "github.com/kubernetes-sigs/aws-ebs-csi-driver/deploy/kubernetes/overlays/stable/ecr/?ref=release-1.24"
```

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Replace release version accordingly.

Step 5: Verify Service Account Association

```
kubectl get serviceaccount ebs-csi-controller-sa -n kube-system -o yaml
```

Look for this annotation:

```
eks.amazonaws.com/role-arn: arn:aws:iam::<account-id>:role/<role-name>
```