eksctl EKS cluster CLI

CONCEPTS

eksctl turns each cluster into CloudFormation stacks; a cluster and each node group are separate stacks you can inspect in AWS.

AWS account + region default region from AWS CLI config

CloudFormation stacks eksctl-<cluster>-cluster, -nodegroup-<ng>

EKS control plane + VPC managed by AWS

Node groups managed (default) or self-managed

What eksctl creates

Pass a ClusterConfig file (-f) instead of long flag lists: it is reviewable, repeatable and works for create, upgrade and delete.

CREATE CLUSTER

`eksctl create cluster`
Default cluster: 2 managed m5.large nodes

`eksctl create cluster -f <file>`
Create from a ClusterConfig file

`--name <name> --region <region>`
Name and region of the cluster

`--version <k8s-version>`
Kubernetes version of the control plane

CLUSTERCONFIG FILE

Minimal cluster.yaml

```
apiVersion: eksctl.io/v1alpha5
kind: ClusterConfig
metadata:
  name: <name>
  region: <region>
managedNodeGroups:
  - name: ng-1
    instanceType: m5.large
    desiredCapacity: 3
    minSize: 1
    maxSize: 5
```

INSPECT CLUSTERS

`eksctl get cluster`
List clusters in the region

NODE GROUPS

`eksctl get nodegroup --cluster <name>`
List node groups

`eksctl create nodegroup --cluster <name> --name <ng>`
Add a node group

`eksctl scale nodegroup --cluster <name> --name <ng> --nodes <n>`
Change desired size

KUBECONFIG

`eksctl utils write-kubeconfig --cluster <name>`
Add the cluster to your kubeconfig

UPGRADES

`eksctl upgrade cluster --name <name>`
Preview the control-plane upgrade

`--version <k8s-version> --approve`
Apply the upgrade, one minor step

Upgrade order: control plane, then node groups, then the default add-ons.

IAM AND ADD-ONS

`eksctl create iamserviceaccount --cluster <name> --name <sa> --namespace <ns> --attach-policy-arn <arn>`
Bind an IAM role to a service account

`eksctl get addon --cluster <name>`
List installed add-ons

DELETE CLUSTER

`eksctl delete cluster --name <name> --wait`
Delete and report errors

`eksctl delete cluster -f <file> --wait`
Delete the cluster from its config

Deletion is destructive: load balancers, volumes or ENIs created by workloads can block it. Remove them first, or delete the leftover CloudFormation stacks by hand.