



ELASTIC KUBERNETES SERVICE

Managed Service?

- Control Plane Management
- Node auto-repair
- Cluster auto-scaling
- NAP → KARPENTER
- Automatic Upgrade
- Automatic Security Patches
- UI dashboard
- Inbuilt add-on Metrics Server
CNI Plugin

MICROSOFT
REDHAT
AWS
ORACLE
Google

↳ developed by
Google

OpenSourced

EKS

additional features

- Infra maintenance, Scaling
- Advance Security
- Integration with other cloud services
- Multi cloud/Hybrid cloud Capabilities

↳ PRODUCTION READY Kubernetes





EKS MODES

(Serverless) → EKS FARGATE

AMAZON EKS

Managed K8s cluster on AWS Cloud

AMAZON EKS DISTRO

OPEN SOURCE EKS ON YOUR DATA CENTRE
OSS Community Support

EKS ON AWS OUTPOST

EKS Hybrid NODE

ON your datacenter

EKS ANYWHERE

ON-PREM
→ BARE METAL
→ VSPHERE
→ cloudStorue

VERSION SUPPORT - ΣΚΣ

STANDARD

EXTENDED

(NO RELEASE CHANNEL)

Cluster will be upgraded automatically at the end of Standard Support

14 Months

- ✗ No auto upgrades
- * charges for extended Support
- * Auto upgraded at the end of extended Support period.
- * 12 Months after Standard



EKS-AUTO MODE

Clusters Mgt → Minimum operational overhead.

Auto Scaling → Automatically add / delete nodes based on demands.

Efficiency → Best practices baked-in, save cost

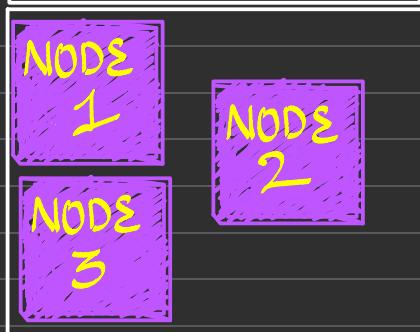
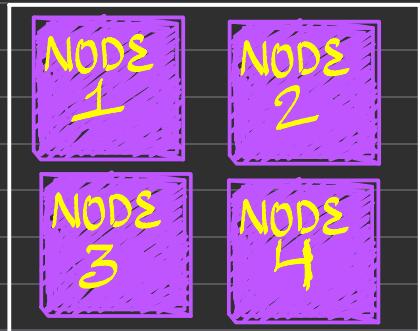
Nodepools → Can create custom nodepools

Quick & easy to Setup

- Provisioned EVS
 - CLI (AWS)
 - Auto mode
- Standard cluster (AWS Console)
- Node pool
- Cluster Walkthrough → Create deployment only via CLI
- Cluster Autoscaler
 - AL-X86-64 → AMI
 - Env variables (AWS-Region)
- dynamic storage
 - SC,
 - IAM Role / policy
- deployed sample app / deployed a full stack

EKS NODE POOL

{Group of nodes with similar attributes}



NODE POOL → default

Machine type → D2s-v5

Image → Ubuntu - Linux

NodePool → Custom-NP

Machine type → NV4as-v4

Node Auto Provisioning (NAP) → (does not work with CA)

Preview



~~AWS~~ Automatically creates/delete Node pools

Cluster Autoscaler → add new nodes in existing node pools.

↓
NAP Enabled

→ Create new node pool based
on Specs of Pending pods
CPU, memory, storage, gpu, labels, selectors