RANCHER

IT大咖说 知识共享平台

AWS re:Invent

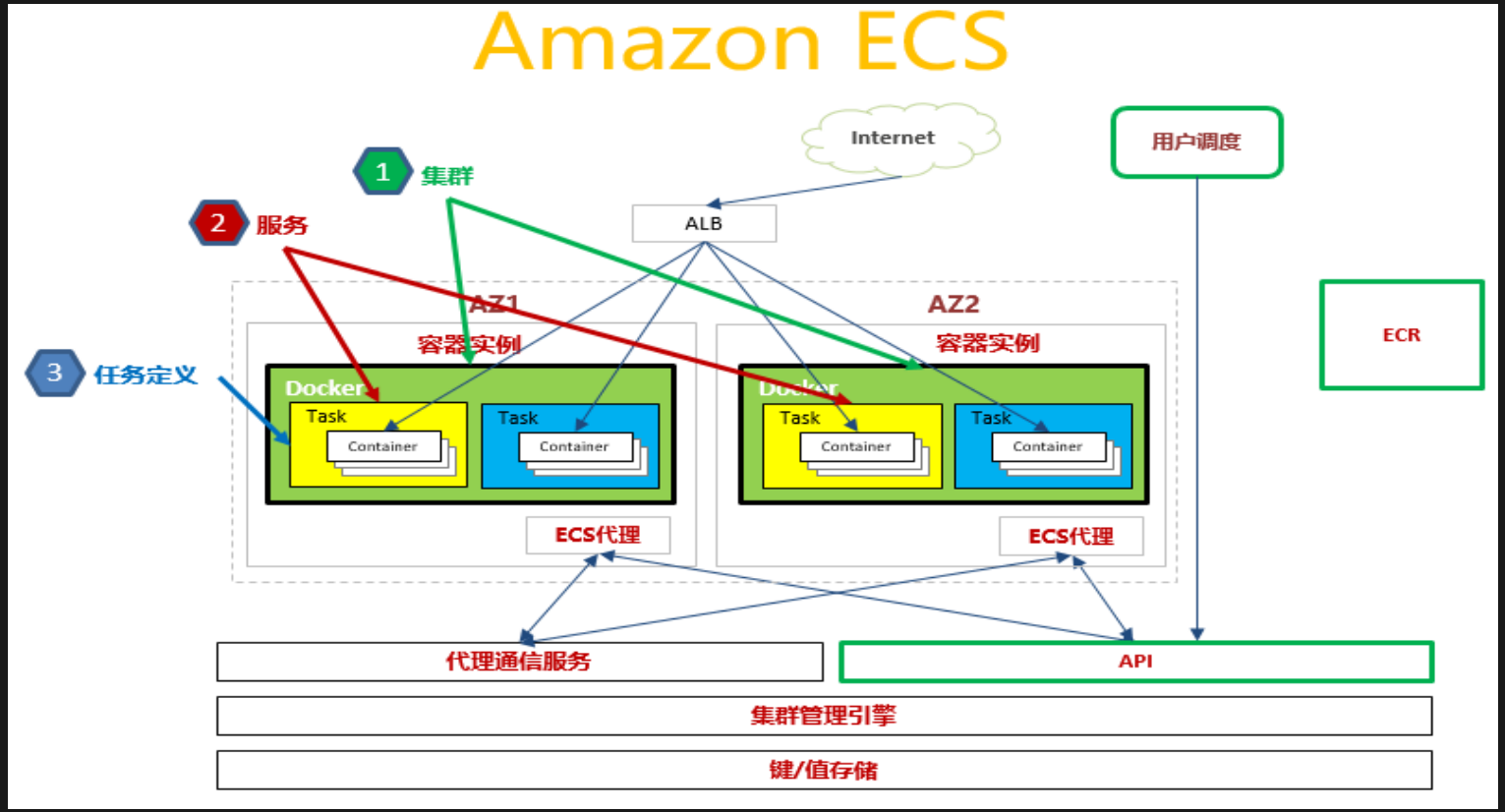
Elastic Container Service for Kubernetes: EKS

AWS re:Invent

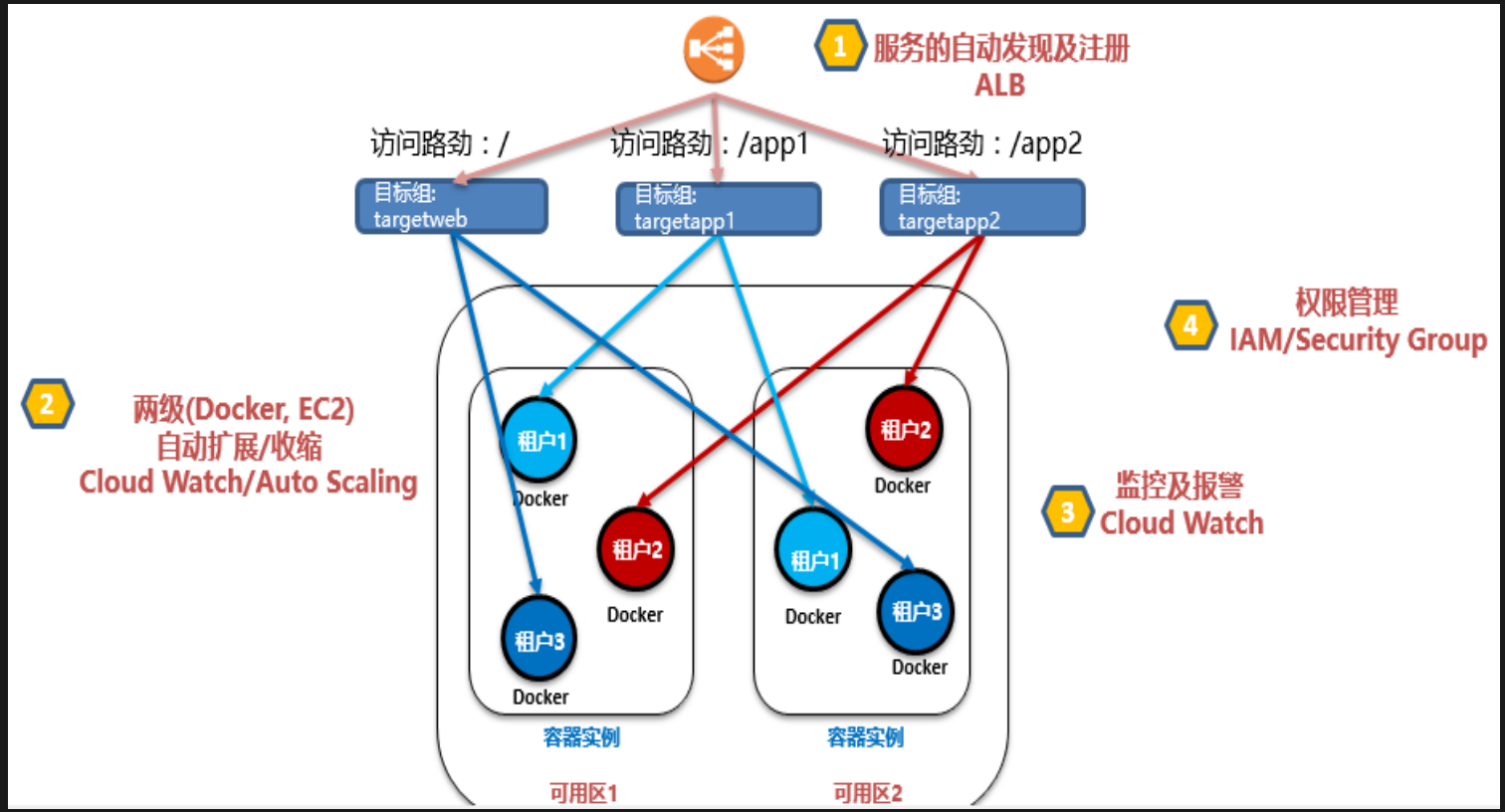
aws

AWS Container World

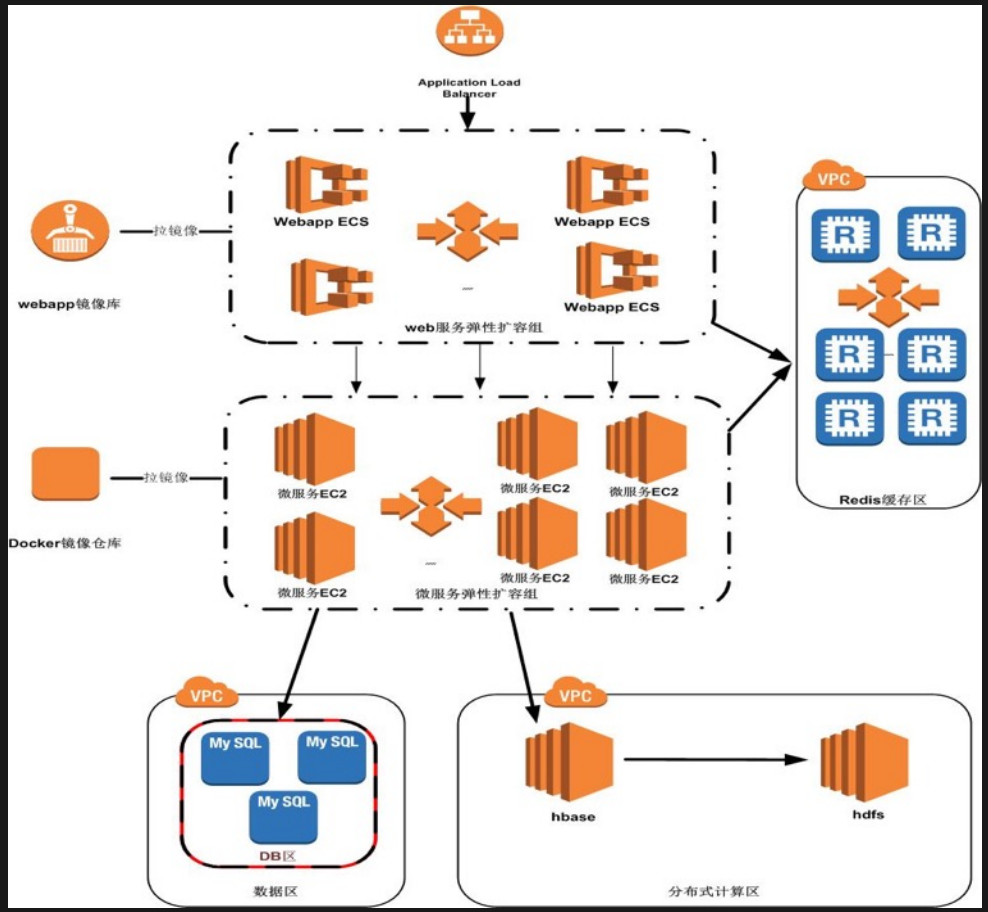
AWS ECS



AWS ECS



AWS ECS



What is Fargate?

```
ecs run-task --launch-type FARGATE
```

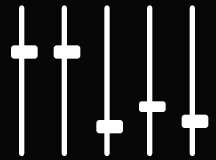
Serverless Experience for Containers

Manage everything at the container level

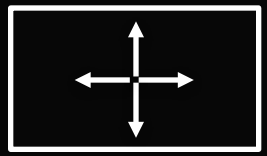
Launch Easily, Scale quickly

Resource based pricing

NO INFRA



MANAGE EVERYTHING AT THE CONTAINER



LAUNCH EASILY, SCALE QUICKLY

RESOURCE BASED PRICING

kubernetes

+

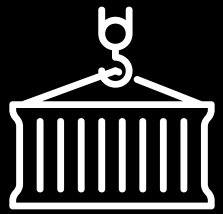
aws

63%

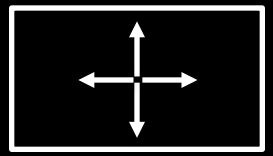
of Kubernetes workloads run on AWS today

—CNCF survey

What is Kubernetes?



Open source container management platform



Helps you run containers at scale

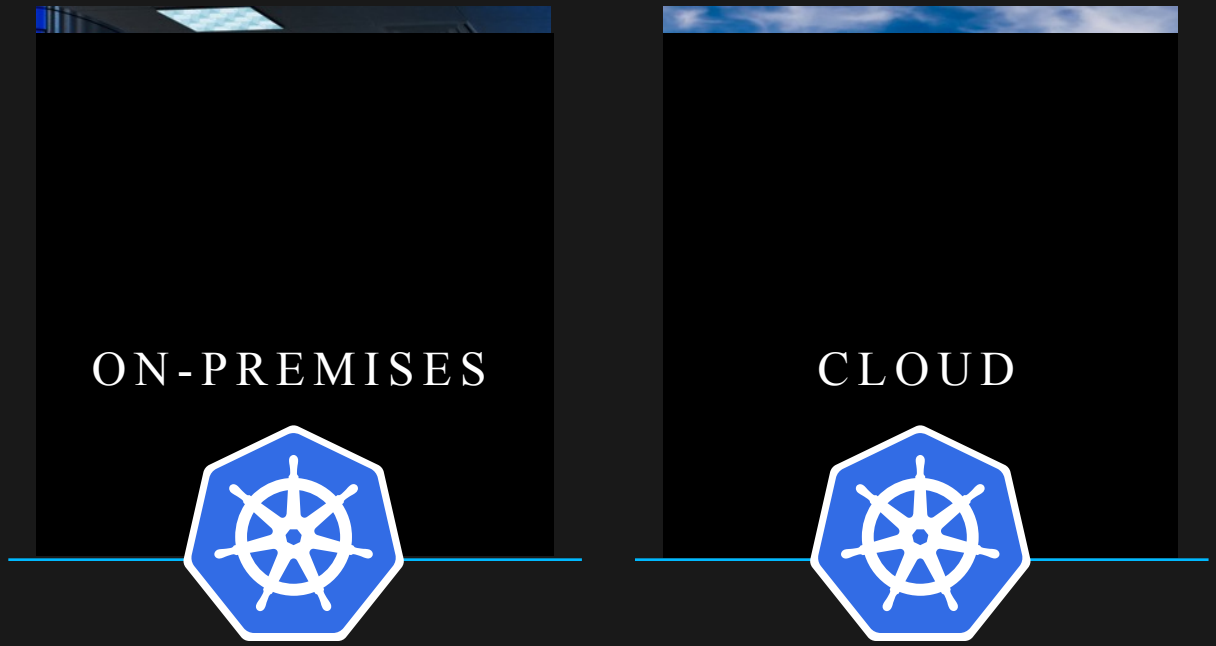
Gives you primitives for building modern applications

Why developers love Kubernetes

Vibrant and growing community of users and contributors

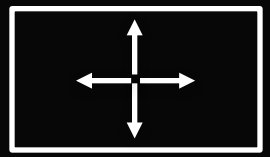
Why developers love Kubernetes

Kubernetes can be run anywhere

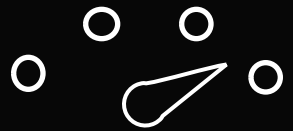


Why developers love Kubernetes

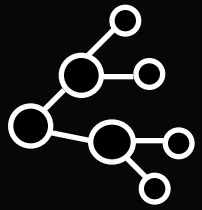
A single extensible API



SCALE

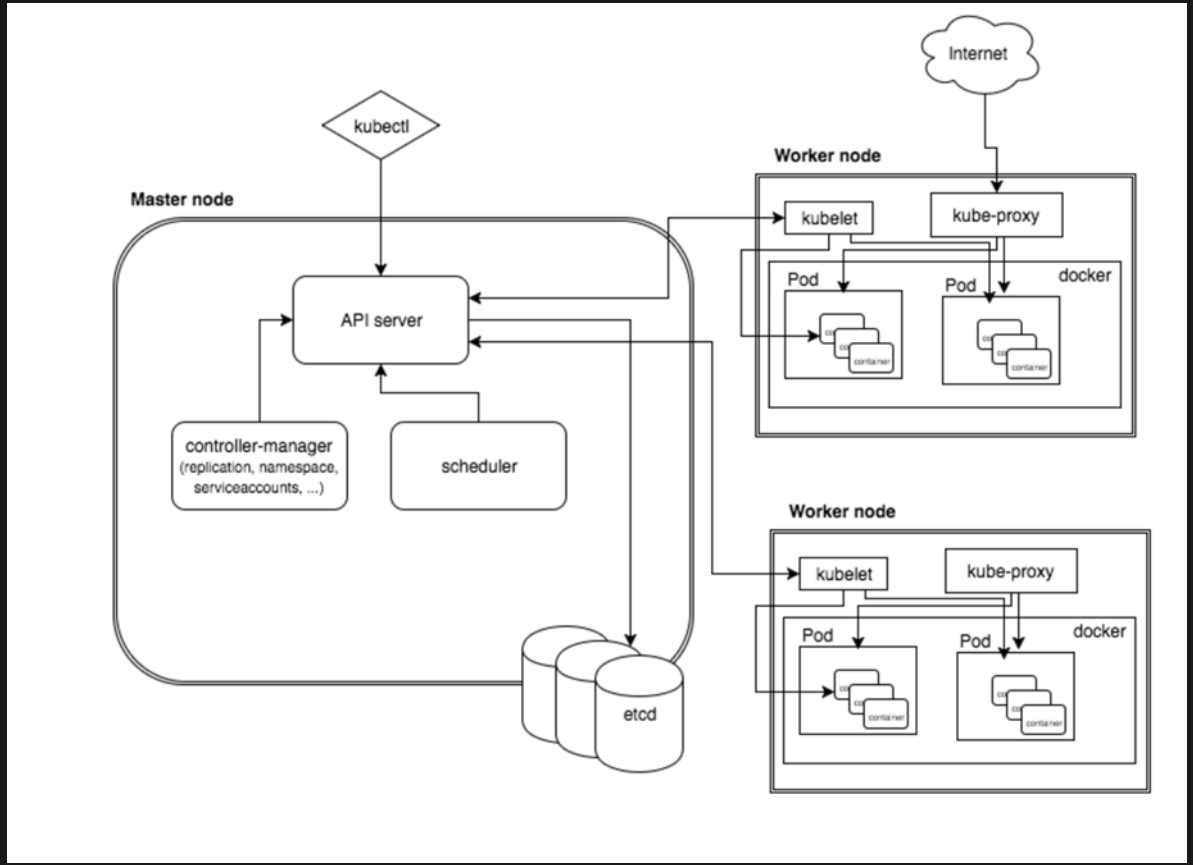


PERFORMANCE

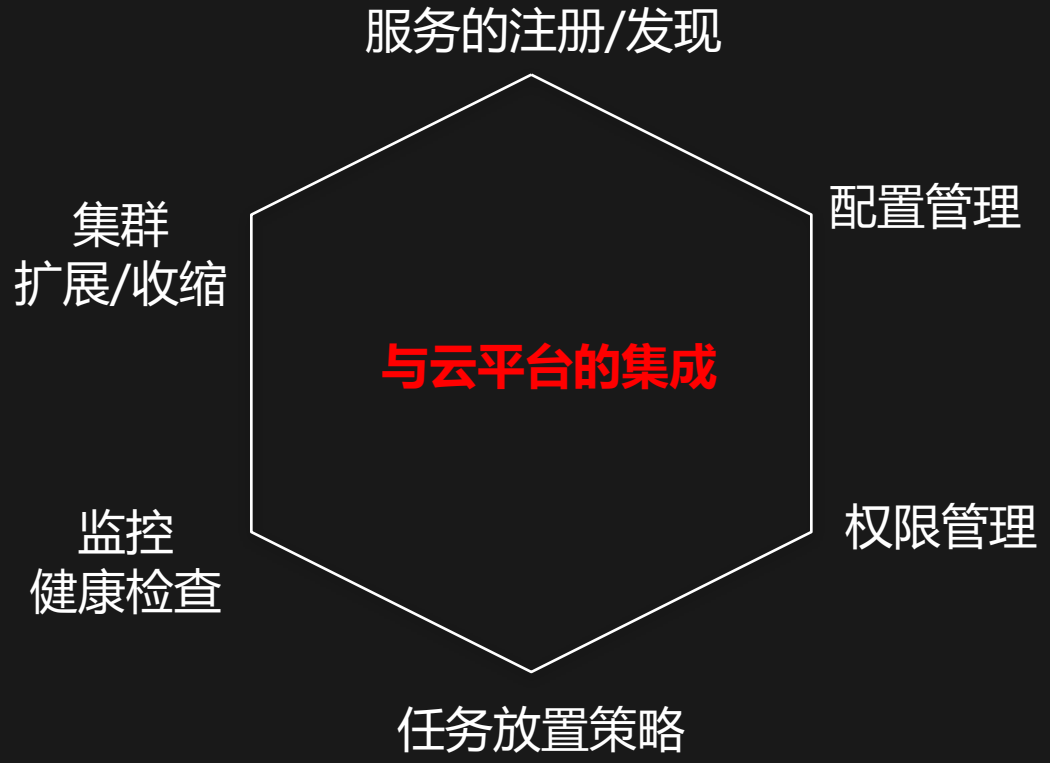


BREADTH

K8S Architecture



微服务改造的挑战

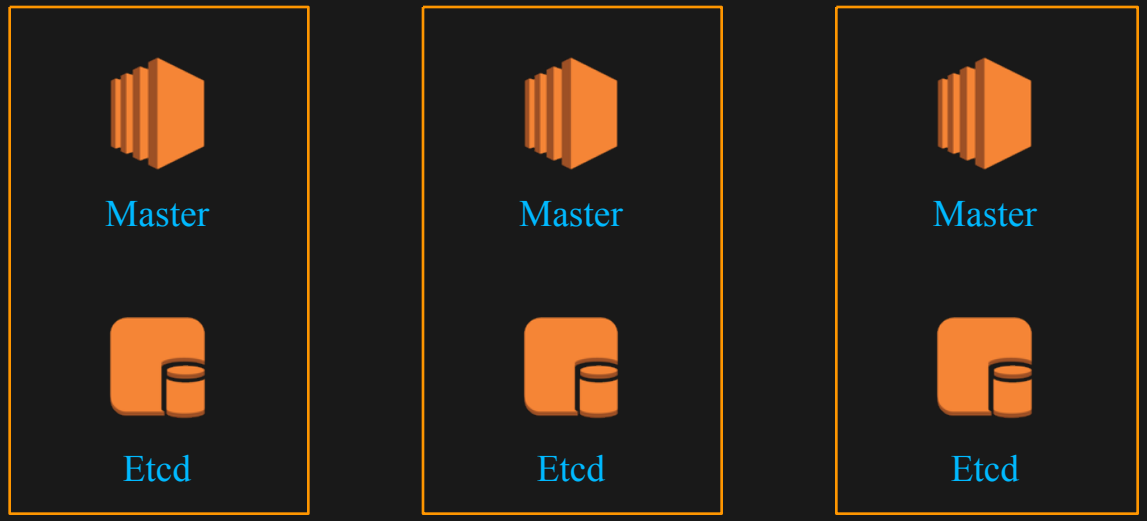


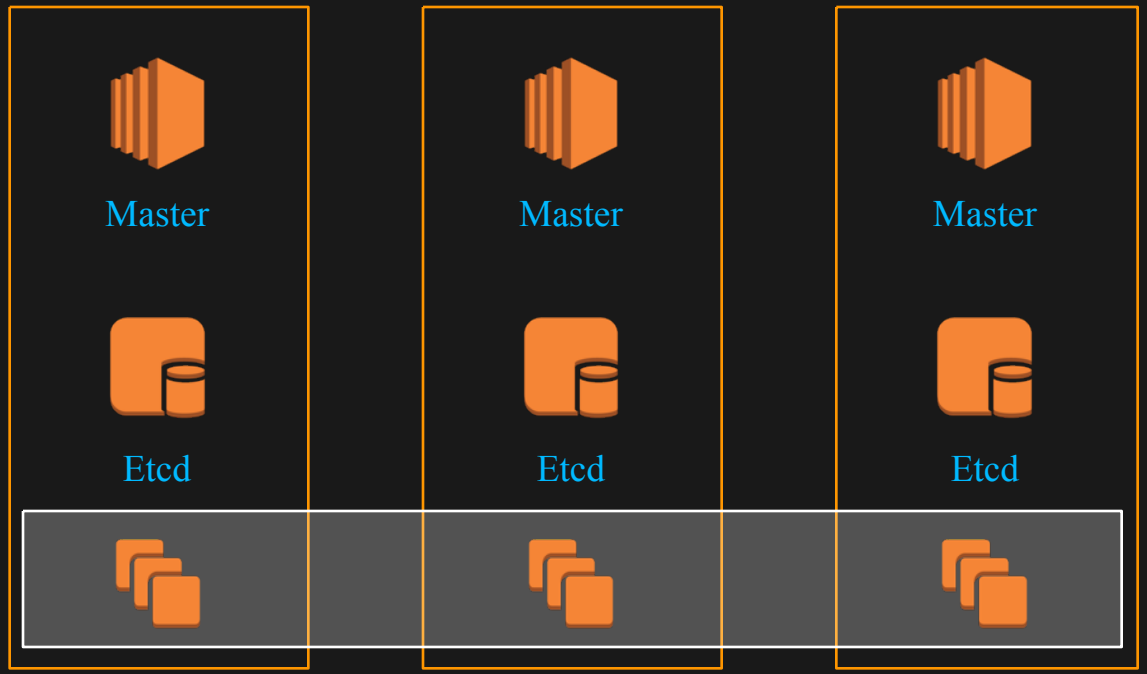
Kubernetes on AWS

3x Kubernetes masters for HA

Kubernetes master

API server	Controller manager	Cloud controller
Scheduler	KubeDNS	Add-ons





”Lets look an excellent Community Tool, KOPS, to build a K8s Cluster on AWS”

1. Install Binaries & Tools: kops, AWS CLI tools, kubectl
2. Set IAM User to “kops”
3. Allow “kops” user Full access to EC2, Route53, S3, IAM, VPC
4. Configure AWS client to new IAM user “kops”
5. Configure DNS (or) Deploy a gossip-based cluster:
    - We hosted the subdomain “dnishi.k8sdemolabs.com” in Route53
6. Create a S3 bucket to save cluster config: “dnishi-kops-store”
7. Set the “kops environmental variables”
8. Create cluster: ”kops create cluster” and “kops validate cluster”

“Native AWS Integrations.”

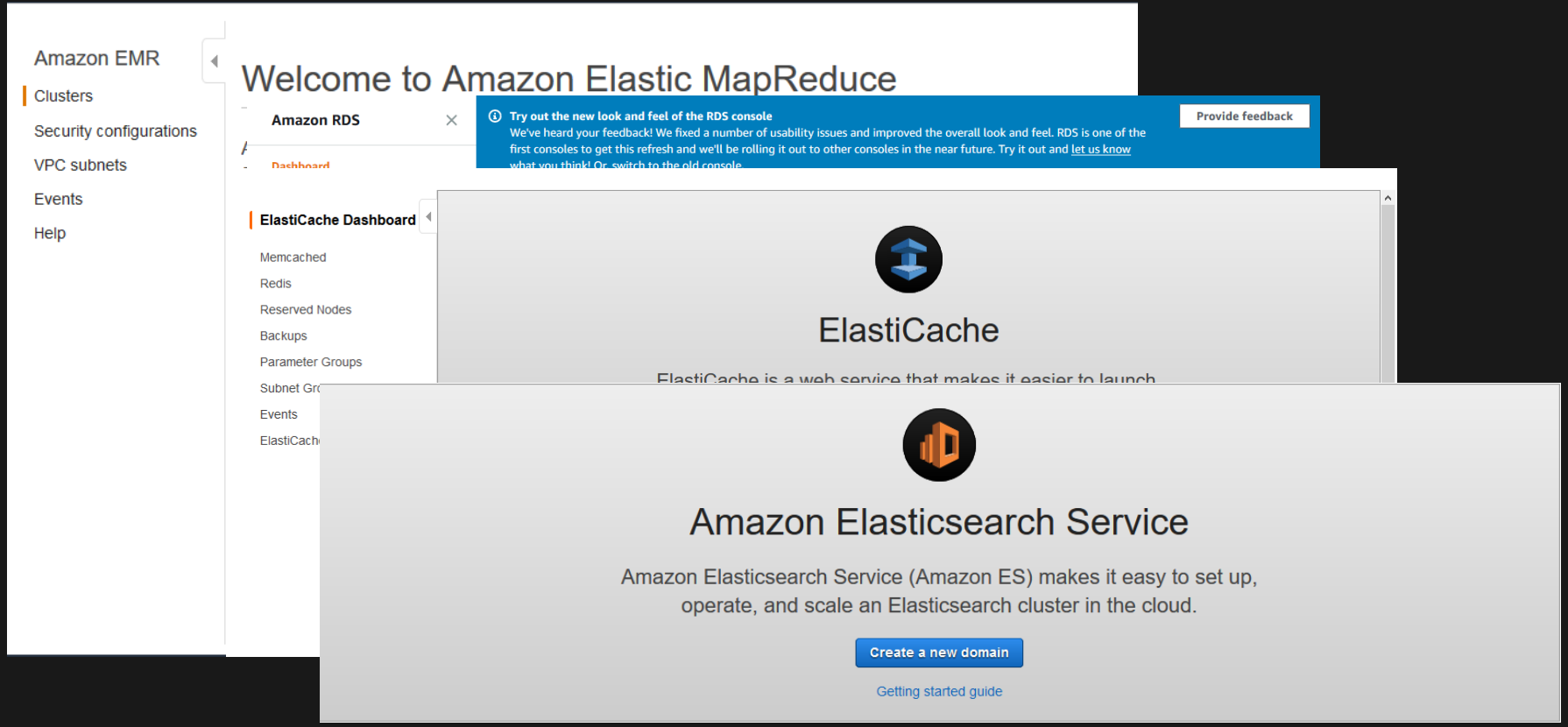
”An Open Source Kubernetes Experience.”

Amazon EKS

ELASTIC CONTAINER SERVICE FOR KUBERNETES

(EKS)

AWS & OpenSource



Tenet 1

EKS is a platform for enterprises
to run production-grade workloads

Tenet 2

EKS provides a native and
upstream Kubernetes experience

Tenet 3

If EKS customers want to use additional AWS services, the integrations are seamless and eliminate undifferentiated heavy lifting

Tenet 4

EKS team actively contributes
to the Kubernetes project

```
aws eks create-cluster
aws eks describe-cluster
aws eks list-clusters
aws eks delete-cluster
```

How is EKS architected?

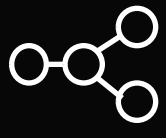
What is the master node configuration in EKS?

TODO: Diagram/animation of logs leaving masters to cloudwatch and cloudtrail

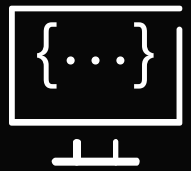
Do my EKS masters autoscale for me?

What is the networking configuration for EKS?

CNI



Native VPC networking with CNI plugin



Pods have the same VPC address inside the pod as on the VPC

Simple, secure networking

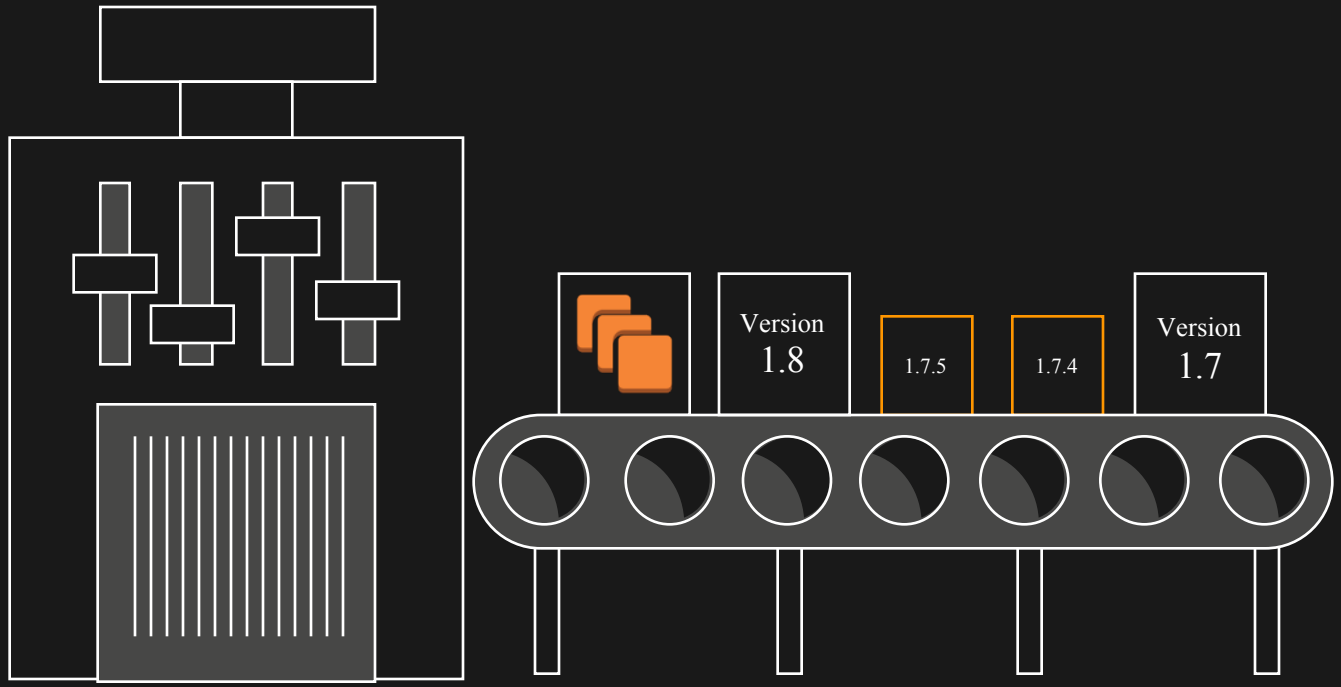
Open source and on Github

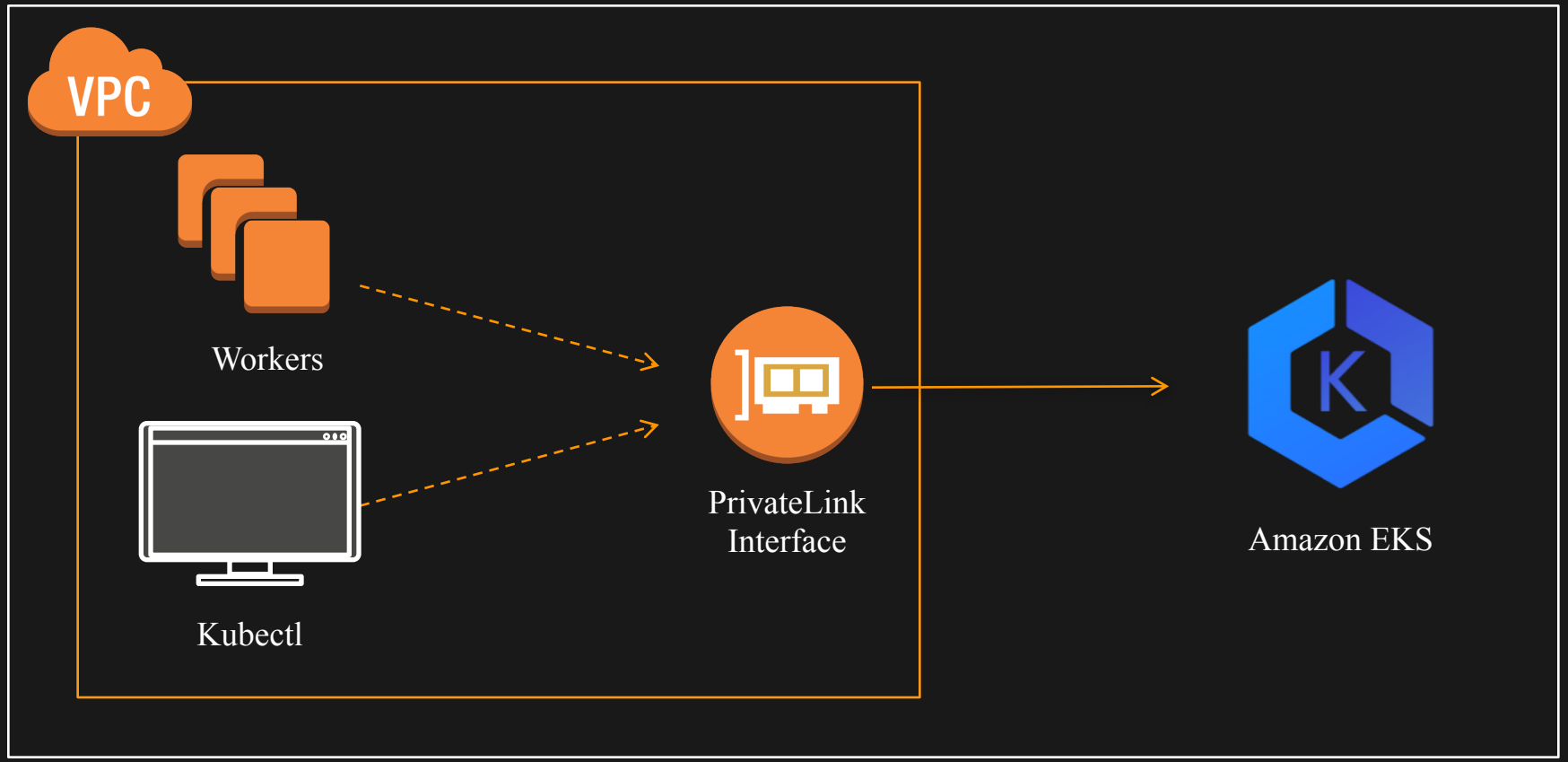
How does IAM authentication work with Kubernetes?

Can I use autoscaling with Amazon EKS?

Can I use Spot Instances with Amazon EKS?

What version of Kubernetes does EKS support?





Roadmap:
Can I use Cloudformation with EKS?