Containers on AWS

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AMAZON CONTAINER SERVICES

Amazon ECS

Amazon EKS

(coming soon)

Fargate

Amazon ECR

WHY DO WE LOVE CONTAINERS?

Packaging

Distribution

Immutable infrastructure

OUR JOURNEY

BUILDING AN ECOSYSTEM

Amazon ECS

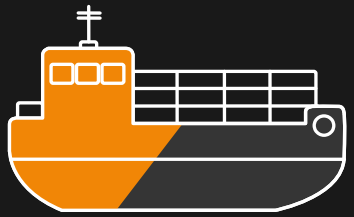
Amazon ECR

PRODUCTION WORKLOADS ON AWS

- AWS VPC networking mode
- Advanced task placement
- Deep integration with AWS platform
- ECS CLI
- Global footprint
- Powerful scheduling engines
- Auto scaling
- CloudWatch metrics
- Load balancers

HELPING CUSTOMERS SCALE CONTAINERS

450+%
growth



Hundreds of millions
of containers started each week

millions
of container instances

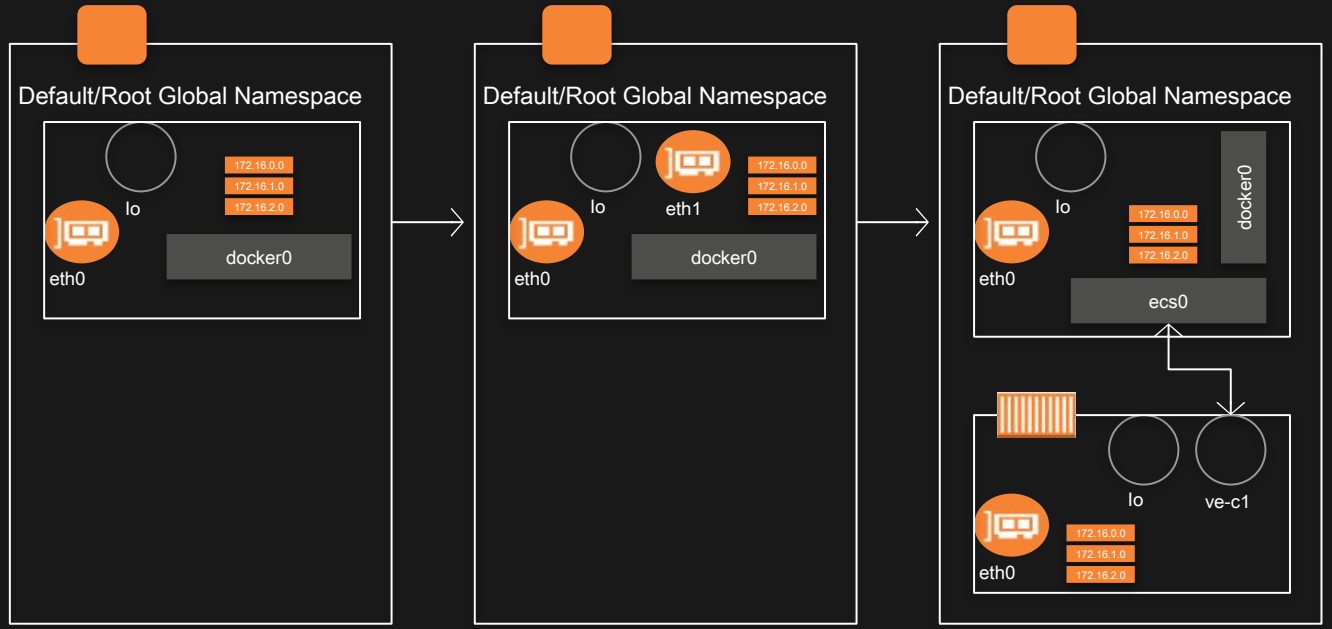
SERVICE LEVEL AGREEMENT

99.9

9

Make ~~containers~~ tasks a fundamental compute primitive

TASK NETWORKING

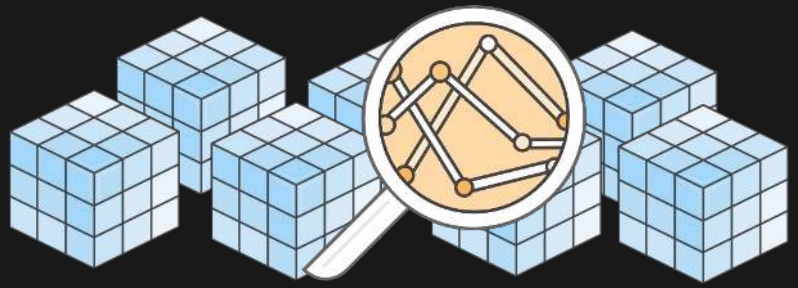


1. Pre ENI Attachment: The Primary ENI (eth0) is in the default namespace

2. ENI Attachment: The new ENI (eth1) is in the default namespace

3. ENI Provisioned: The ECS Agent invokes CNI plugins to move the new ENI into a new namespace and configures addresses and routes

MANAGED SERVICE DISCOVERY



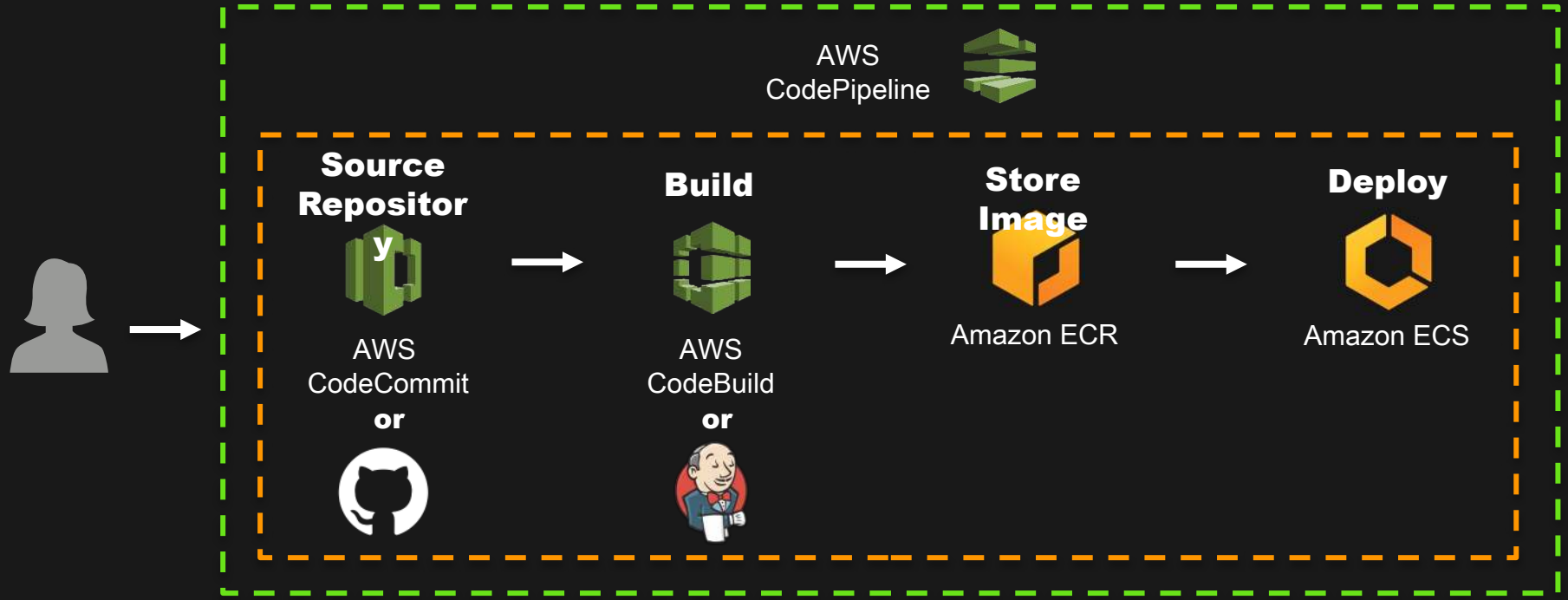
Applications invoked by name

Automatically resolved to IP or port

Native to Amazon ECS services

No infrastructure to manage

FULL CD WITH AWS CODEPIPELINE

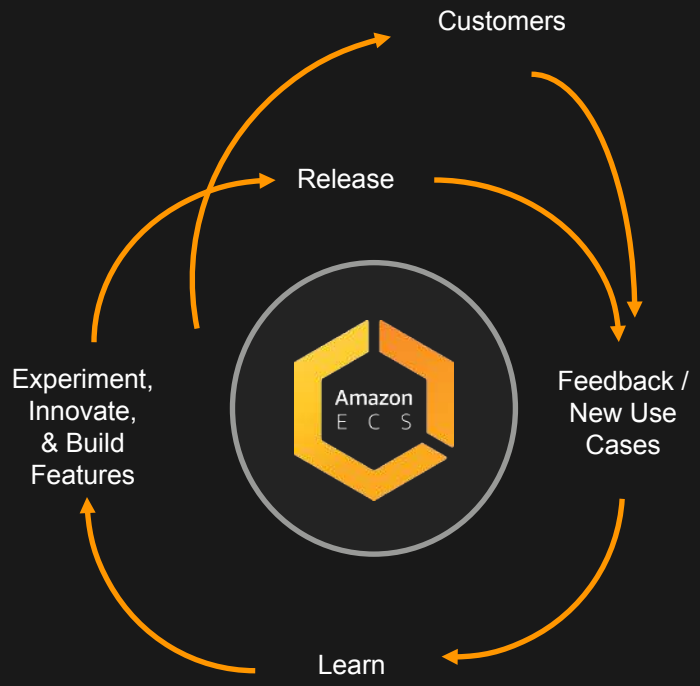


https://github.com/richarvey/bl_docker_to_production_ecs

WINDOWS CONTAINERS NOW GA

- AWS IAM roles for tasks
- Advanced task placement
- Deep integration with AWS platform
- ECS CLI
- Global footprint
- Powerful scheduling engines
- Auto scaling
- CloudWatch metrics
- Load balancers

CUSTOMERS ARE OUR KEY!



50+

releases since 2015

CHANGING COMPUTE CONSUMPTION MODEL

No instances to manage

Task native API

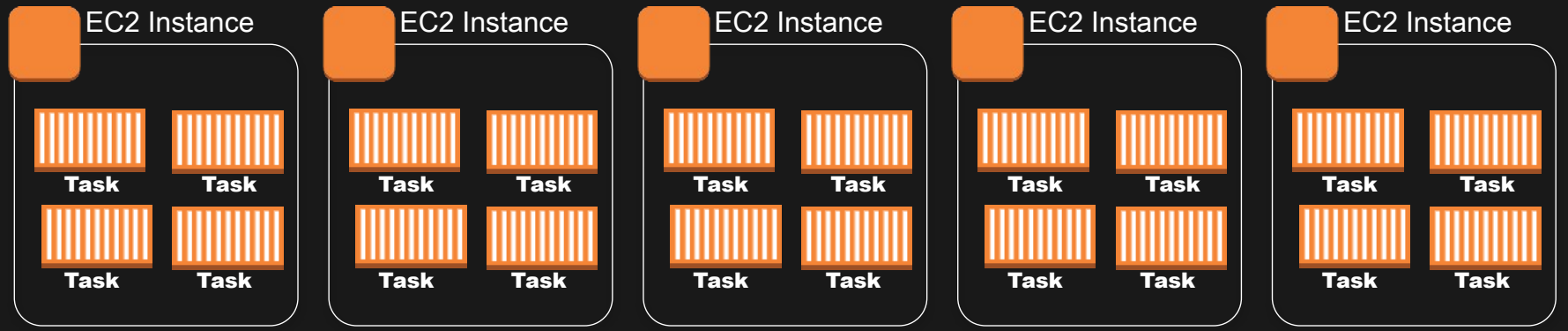
Resource based pricing

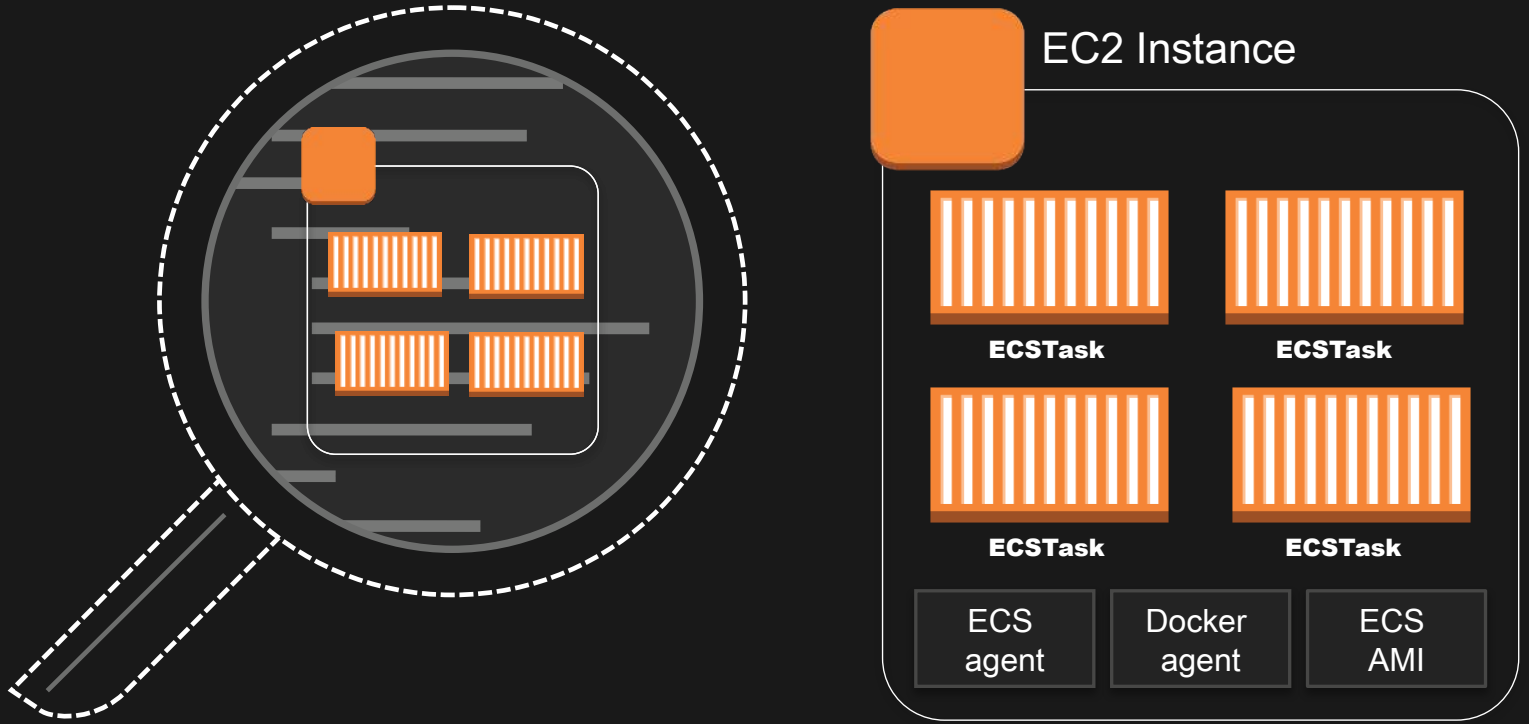
=

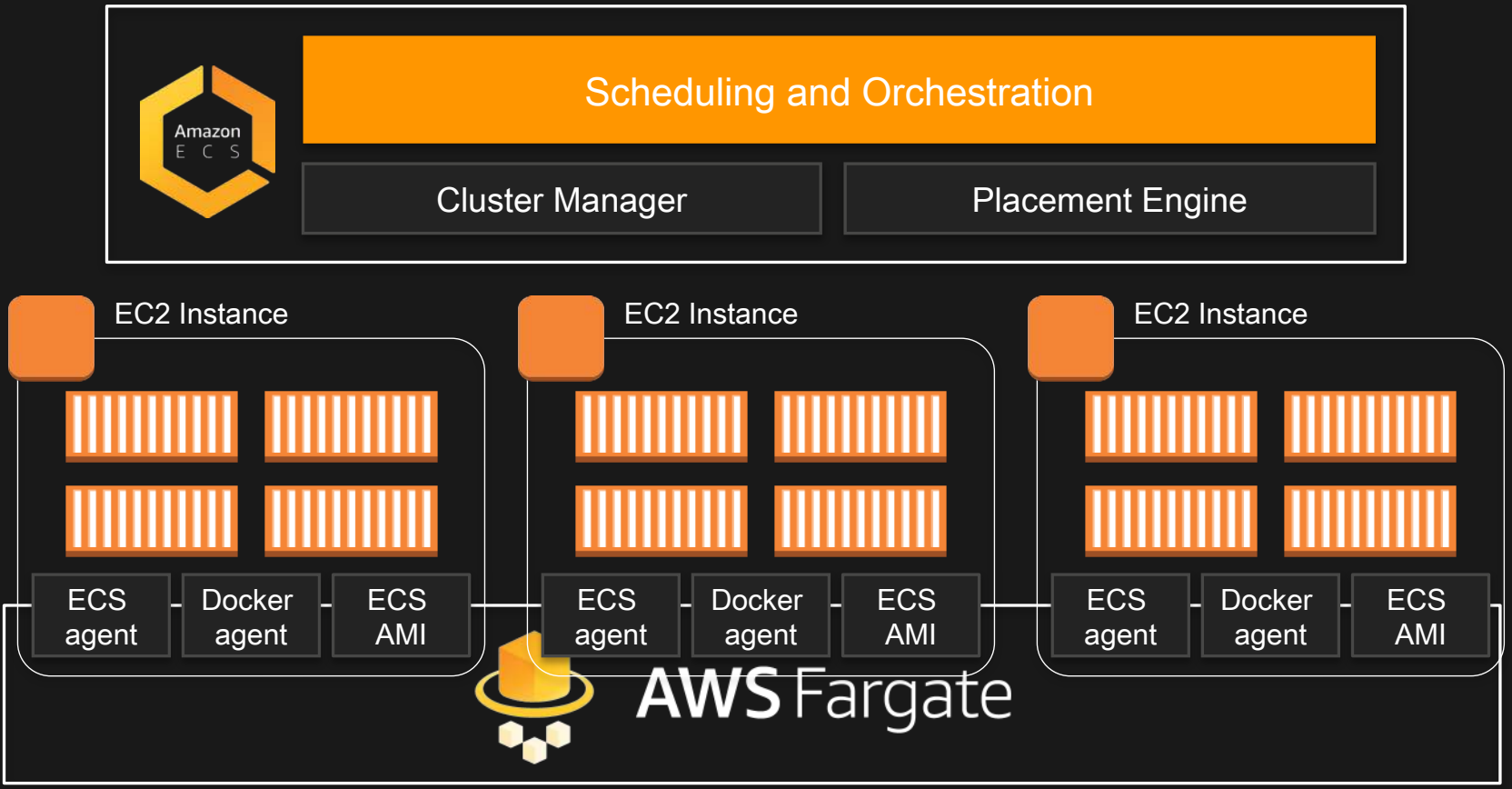
Simple, easy to use, powerful – and new consumption model


HOW DO I RUN
CONTAINERS
ON FARGATE?

RUNNING CONTAINERS







CONFIGURATIONS & PRICING

TASK CPU & MEMORY CONFIGURATIONS

Flexible configuration options –
50 CPU/memory configurations

CPU	Memory
256 (.25 vCPU)	512MB*, 1GB, 2GB
512 (.5 vCPU)	1GB to 4GB (1GB increments)
1024 (1 vCPU)	2GB to 8GB (1GB increments)
2048 (2 vCPU)	4GB to 16GB (1GB increments)
4096 (4 vCPU)	8GB to 30GB (1GB increments)

AVAILABLE NOW!

Fargate

Amazon ECS

Broad range of customers

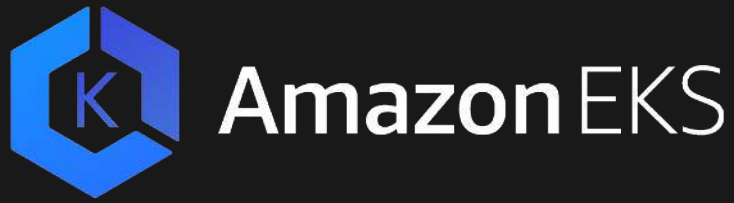
“By taking advantage of Amazon ECS, we have the power to understand, manipulate, and manage our environment easily.”

Zaven Boni

DevOps Engineering Lead, GoPro

70%

Reduction in Compute Footprint



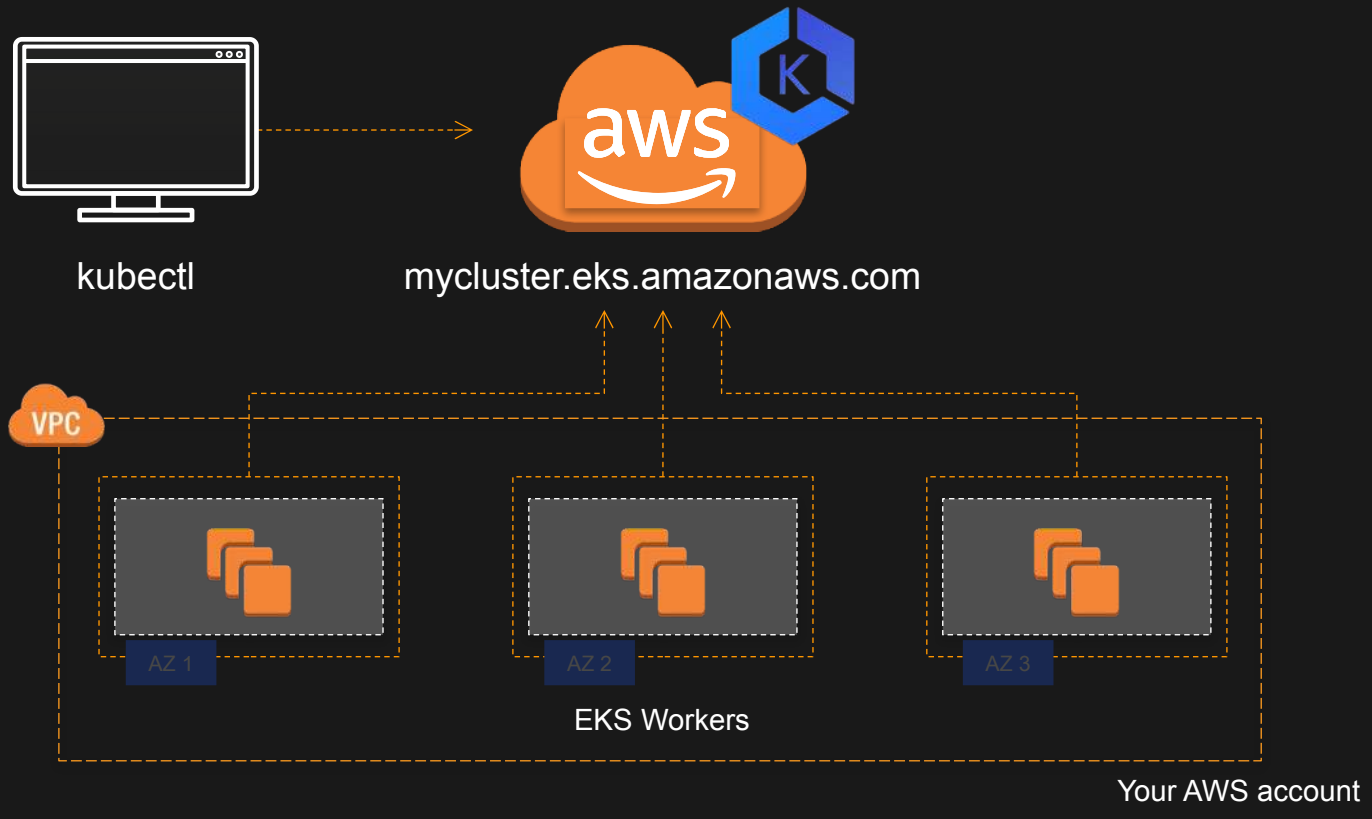
ELASTIC CONTAINER SERVICE FOR KUBERNETES (EKS)

57%

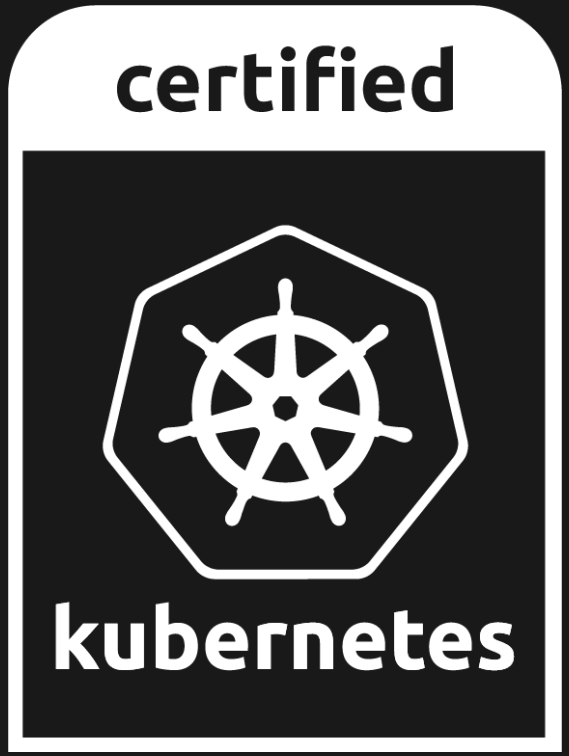
of Kubernetes workloads run on AWS today

— Cloud Native Computing Foundation

Amazon EKS


kubectl
mycluster.eks.amazonaws.com
VPC
AZ 1
AZ 2
AZ 3
EKS Workers
Your AWS account

EKS is Kubernetes Certified



Roadmap:
Can I use Fargate with EKS?

Recap/Highlights

- Lots of options to run containers in AWS
- Task Level Networking extends VPC's into containers
- 99.99 SLA
- Service Discovery
- Full CodePipeline integration
- Production ready and used by Customers Today!

Demo

Fargate

THANK YOU

https://aws.amazon.com/containers

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