

# Containers meet Serverless

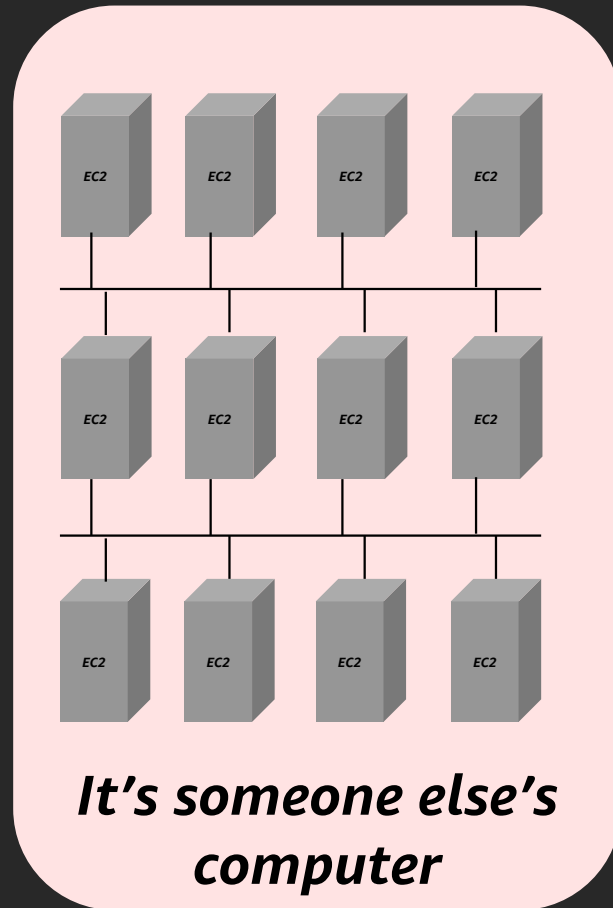
Cloud Day 2020  
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Massimo Re Ferrè  
Principal Technologist @ Amazon Web Services



# What's Cloud?

**Answer #1**

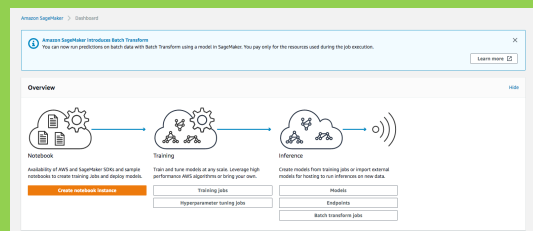
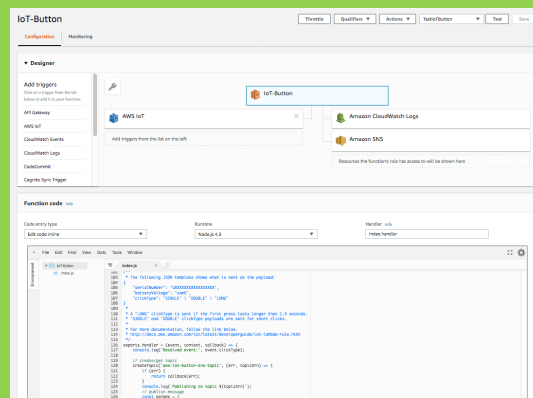


"I have 3.465 VMs on-prem and I will migrate them to 3.465 Cloud instances"

"I am closing my data center and I will use an Amazon region as my new data center"

# What's Cloud?

Answer #2

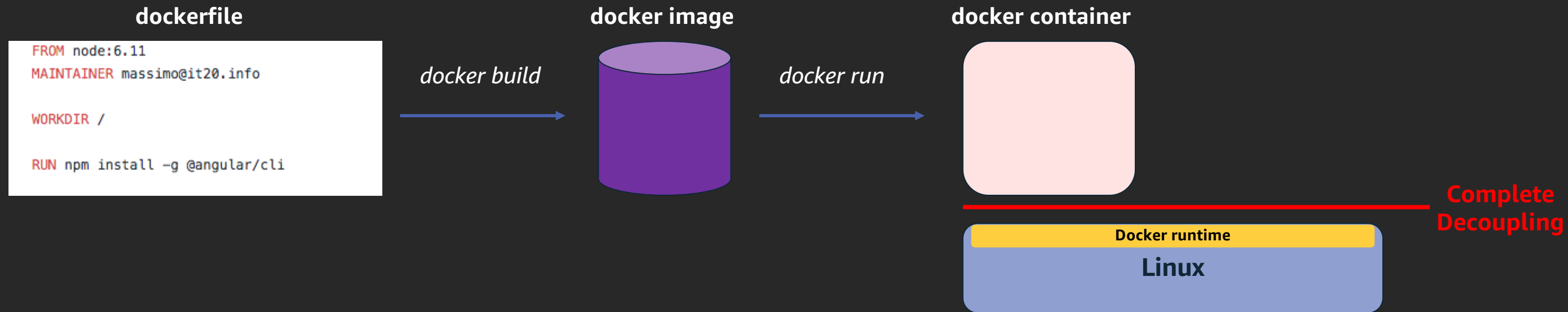


*It's a new platform*

“I want to develop a new solution leveraging all the benefits of the cloud beyond infrastructure elasticity”

“I want to focus on writing my code and I want to avoid dealing with low level infrastructure details”

# Docker 101



Aren't these problems solved by VMs?

Containers are lightweight (or at least they should be)

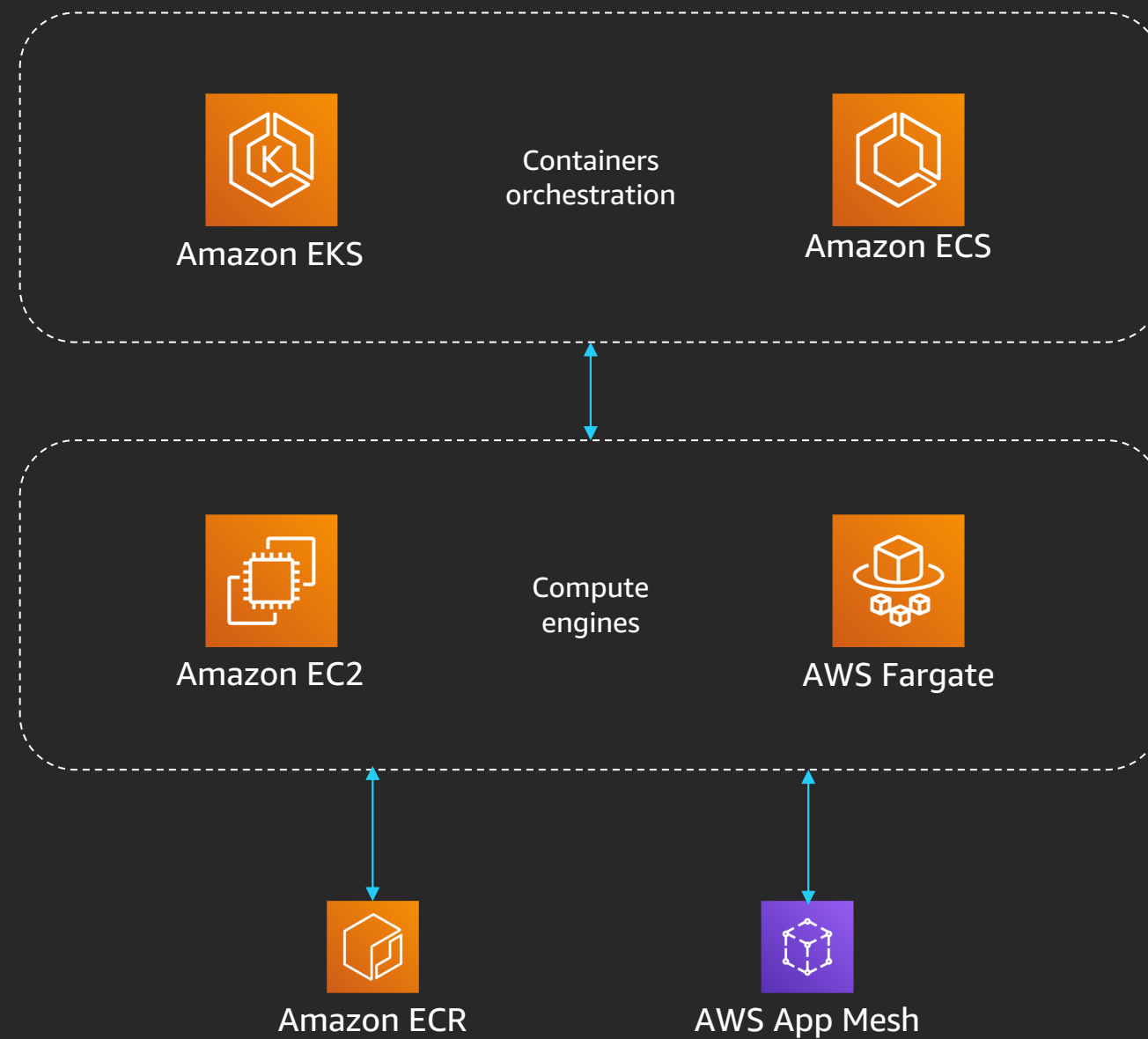
Containers are infrastructure agnostics

Containers have a dev friendly packaging mechanism (Dockerfile)

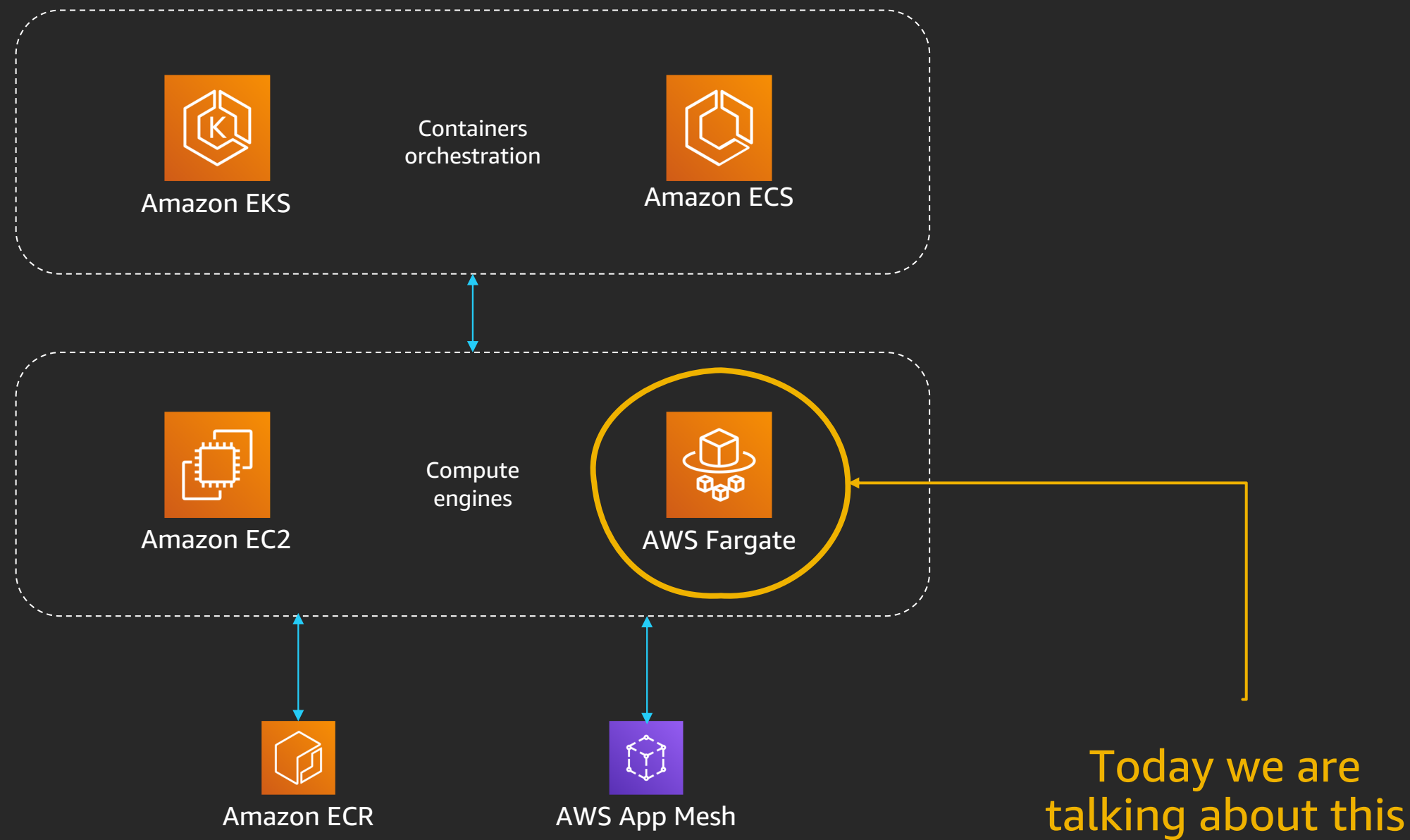
Containers are ideal for immutable deployments

Containers are easy to consume (docker run image) & share (FROM: image)

# AWS Container Services: the 33k feet view



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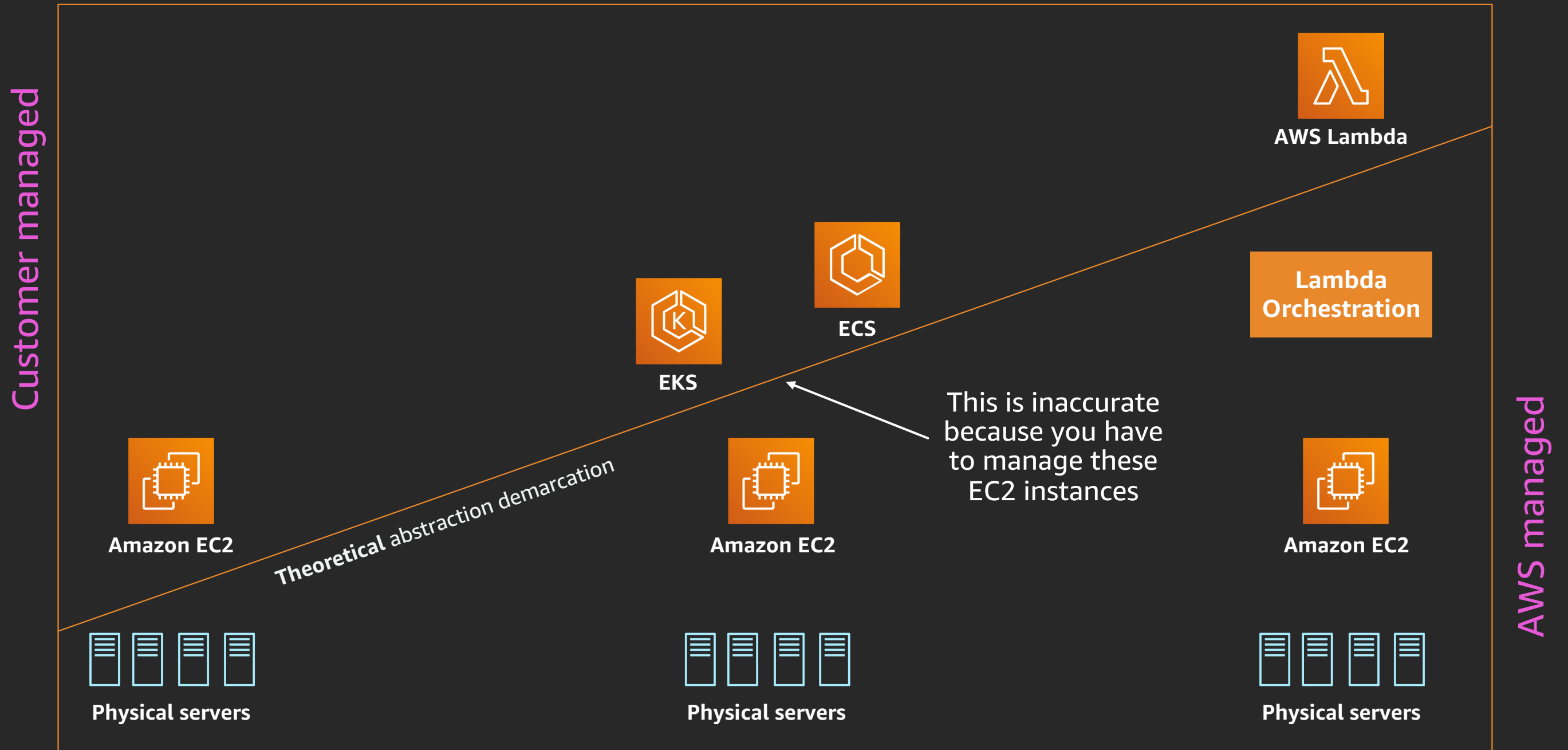


# Cloud abstractions should not leak (yet they do)

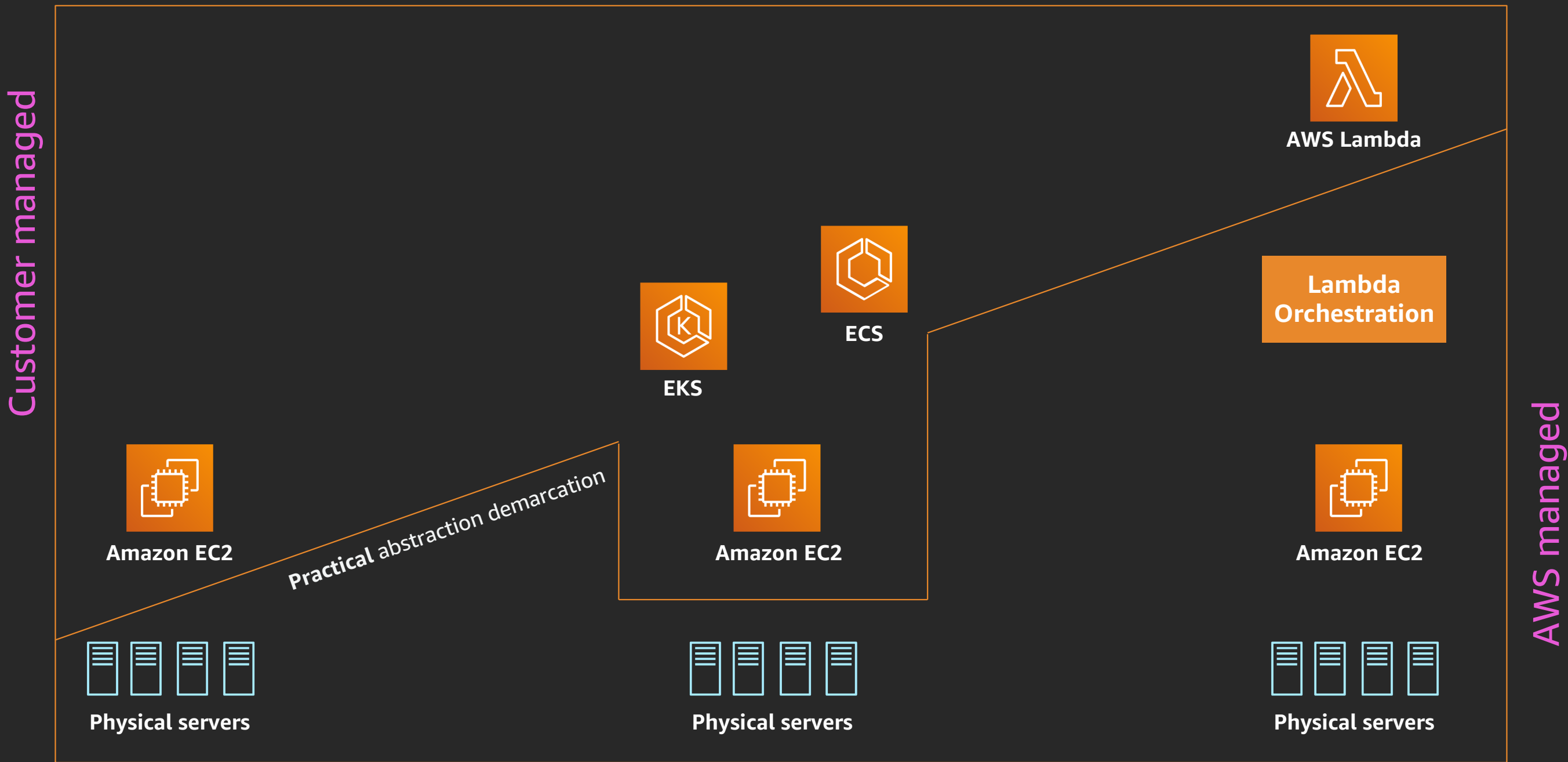
- If you use EC2 you won't have to manage the hypervisor/servers
- If you use Lambda you won't have to manage the stack underneath it
- Why, if you use containers, do you have to manage instances?



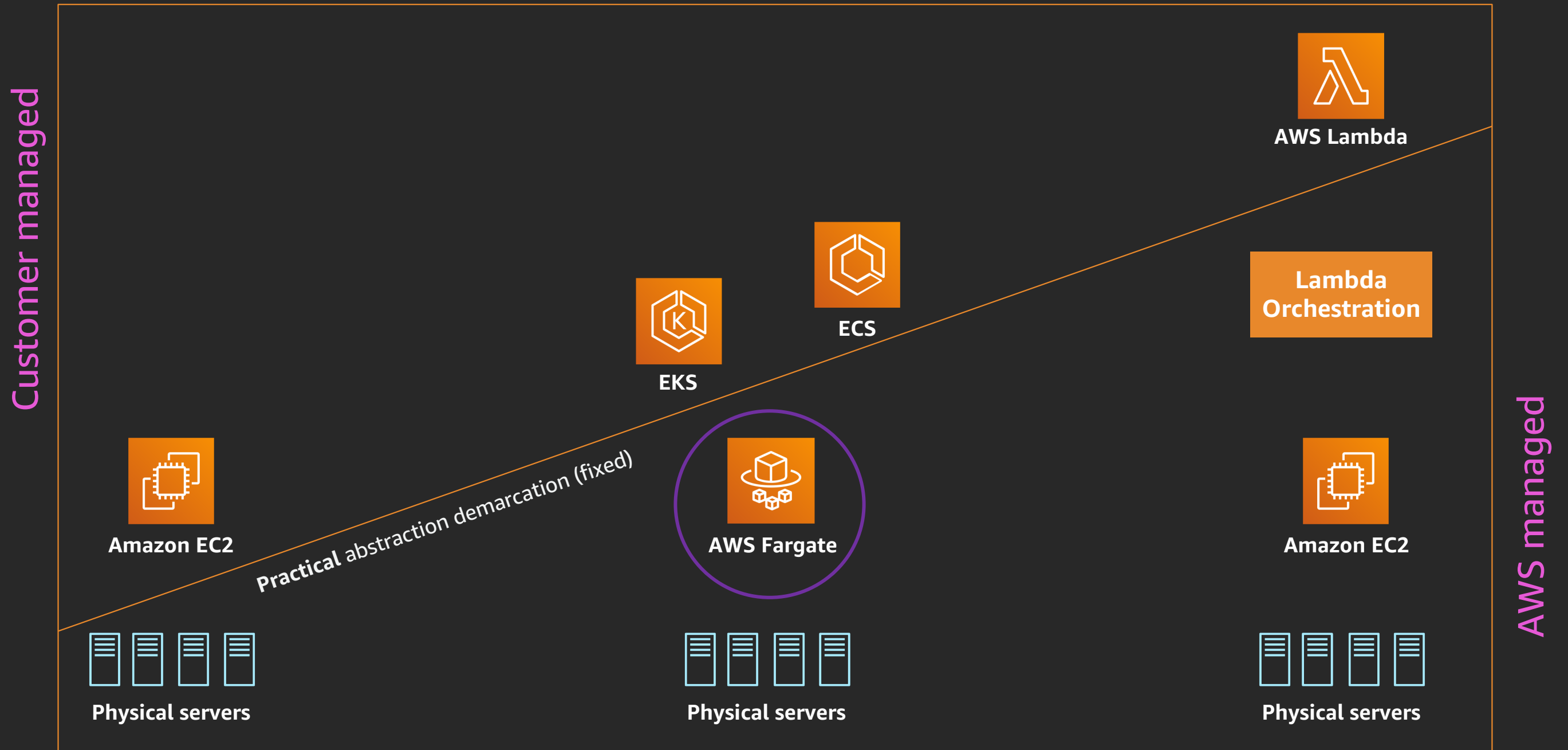
# Cloud Abstractions



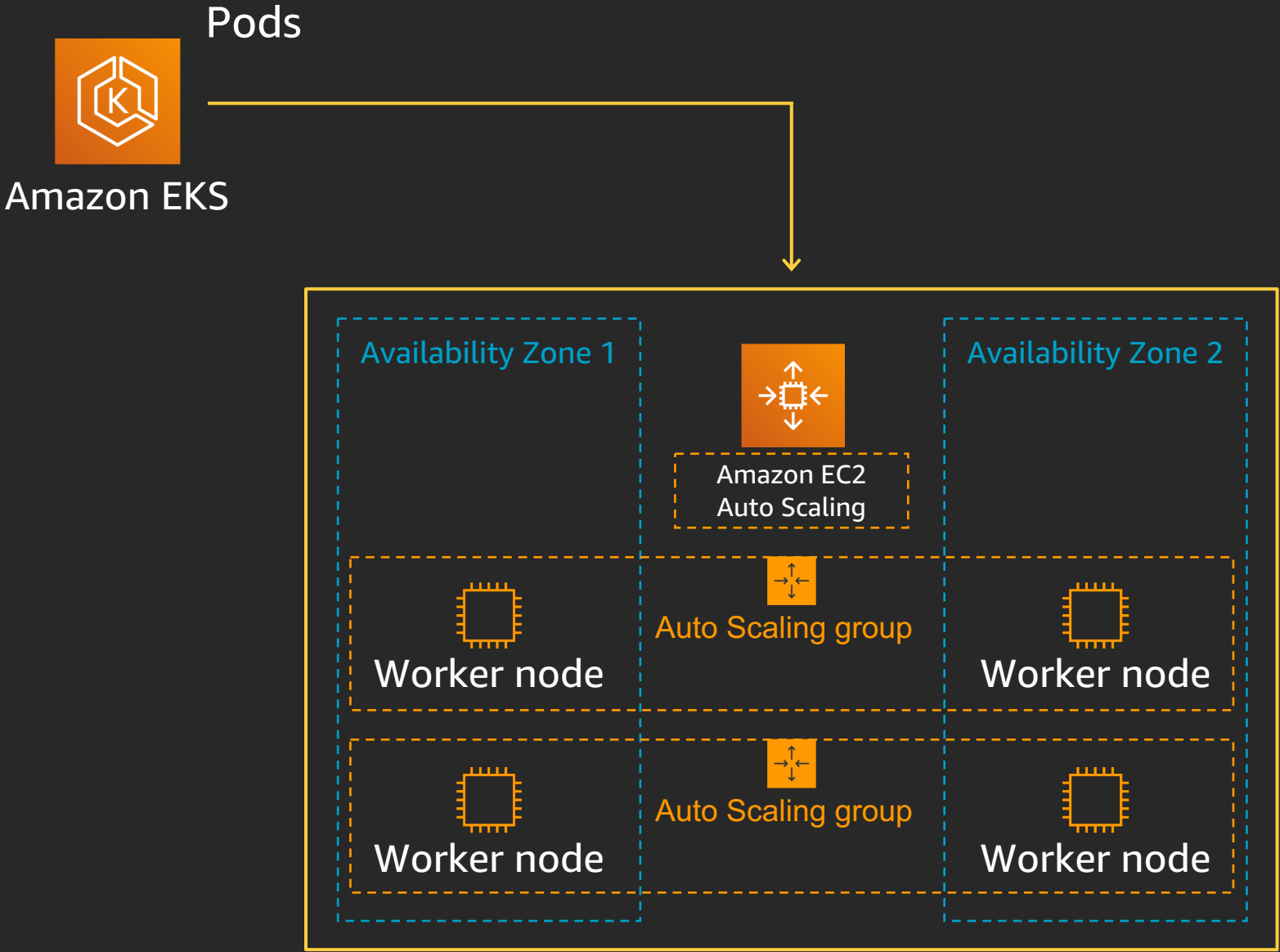
# Cloud Abstractions



# Cloud Abstractions

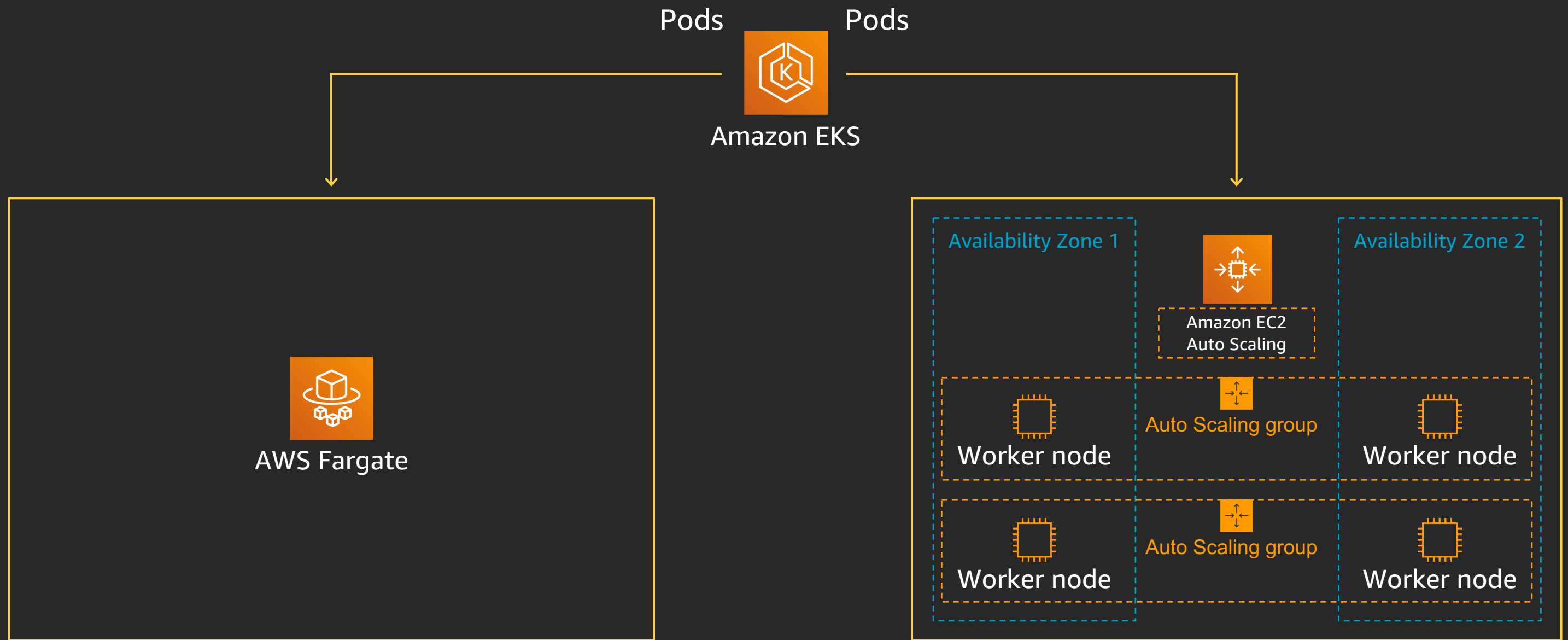


# EKS data plane options (similar concepts apply to ECS)



Traditional container data plane

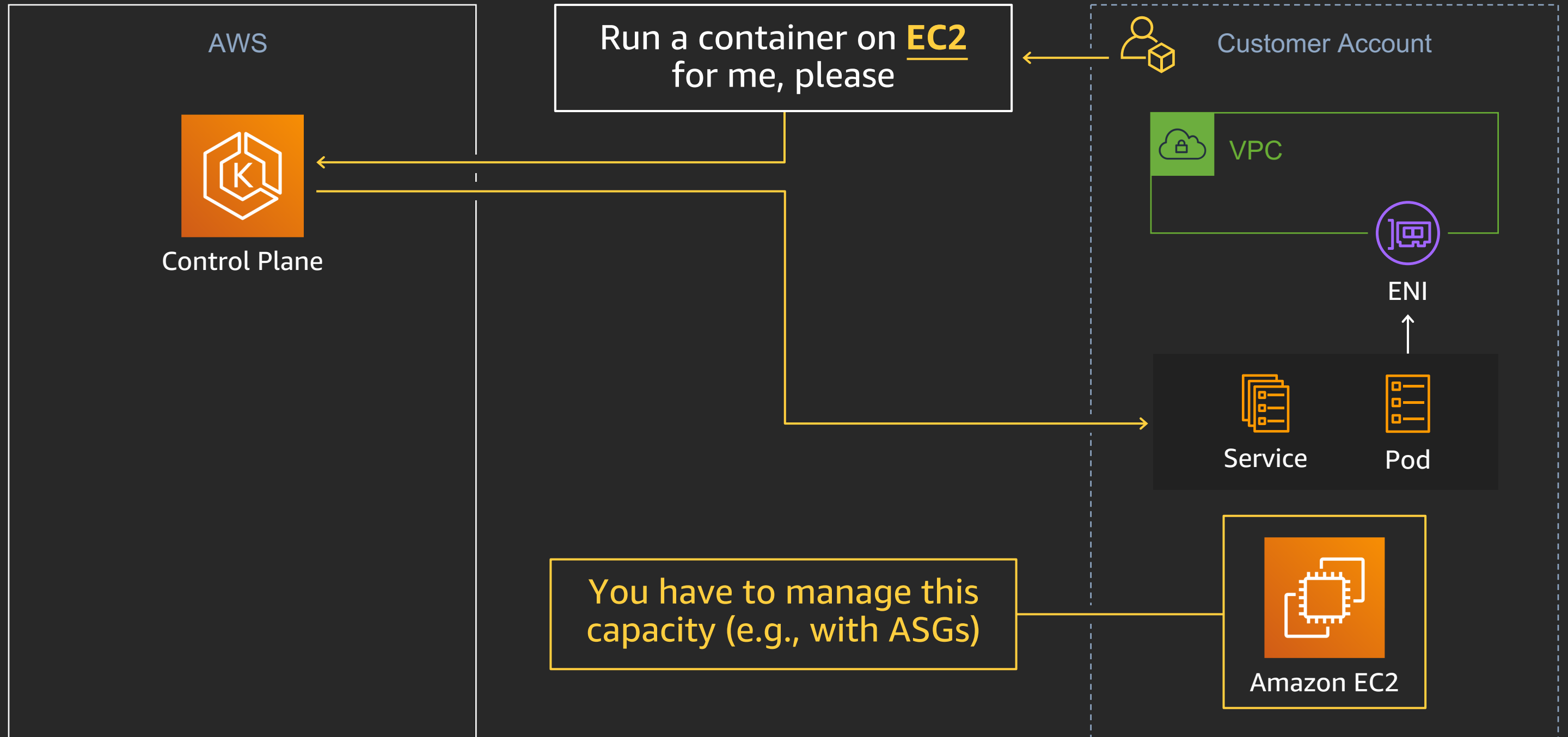
# EKS data plane options (similar concepts apply to ECS)



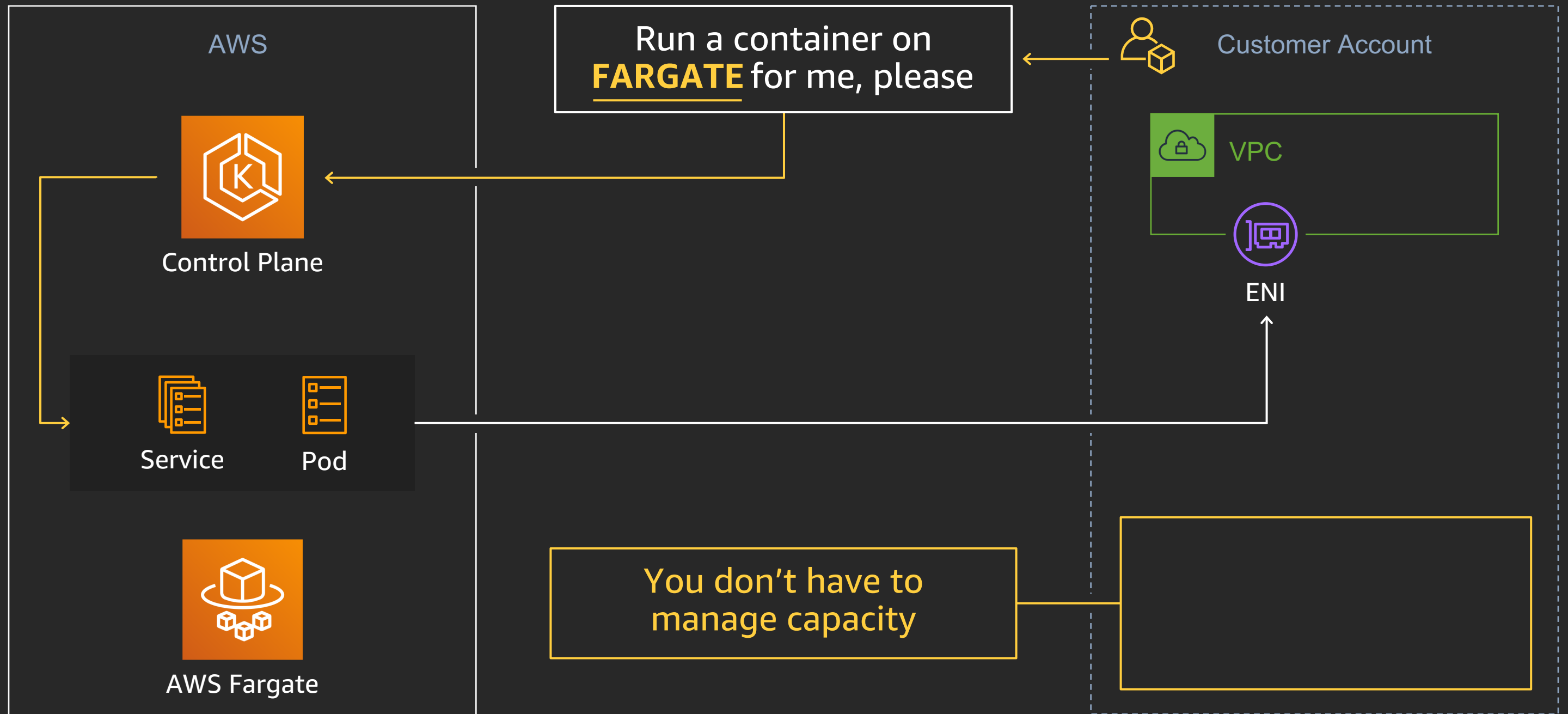
Serverless container data plane

Traditional container data plane

# The EC2 flow at 33,000 feet



# The Fargate flow at 33,000 feet



# Why customers love it?

- Improved security
  - 1:1 mapping pod/task to node
- No AMI management
  - Fully managed node stack
- No more cluster scaling (in and out)
  - There are no cluster nodes, you only pay for pods/tasks
- No more capacity wasting
  - See above



# Customers come for the managed experience...

## ... and then they stay for Spot instances and tasks!



Skyscanner is a travel fare aggregator website and travel metasearch engine based in Edinburgh, Scotland

**“We are currently tracking 74% saving over all regions.”**

—Paul Gillespie,  
Principal Architect/Tribe Lead

<https://aws.amazon.com/blogs/aws/aws-fargate-spot-now-generally-available/>

# AWS Fargate demo(s)



# Call to action: explore more - Useful links

- Amazon ECS and AWS Fargate

- <https://ecsworkshop.com/>

- Amazon EKS and AWS Fargate

- <https://www.youtube.com/watch?v=m-3tMXmWWQw>

# Thank you

Massimo Re Ferrè

Twitter: [twitter.com/mreferre](https://twitter.com/mreferre)

