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Introduction to Amazon EKS

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Elastic Container Service for Kubernetes



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EKS



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- Manage masters
- Highly available setup
- Upgrades





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57%

of Kubernetes workloads run
on AWS today

— Cloud Native Computing Foundation



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



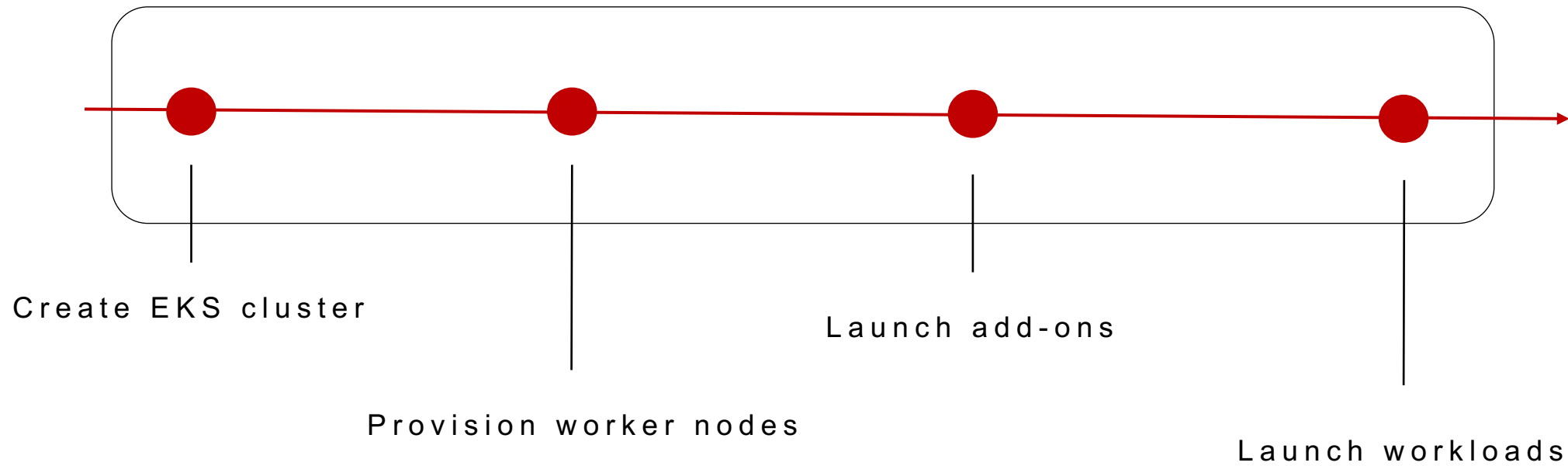
Tenet 4

EKS team actively contributes
to the Kubernetes project

EKS Customers



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EKS – Kubernetes masters



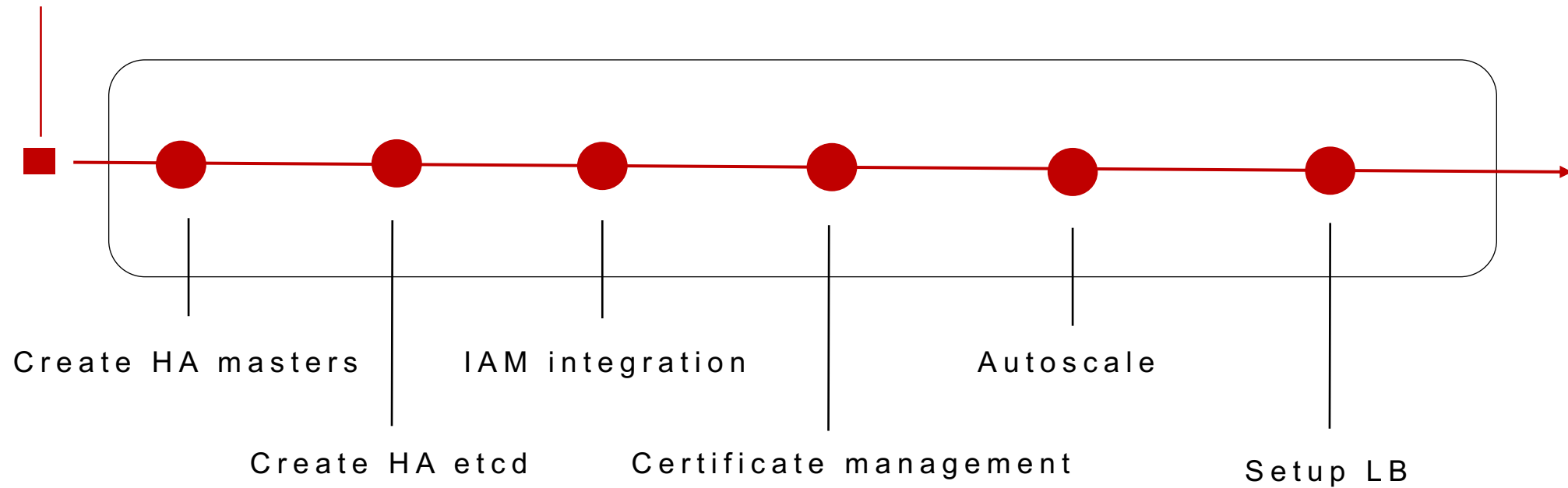
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Create cluster



Amazon EKS

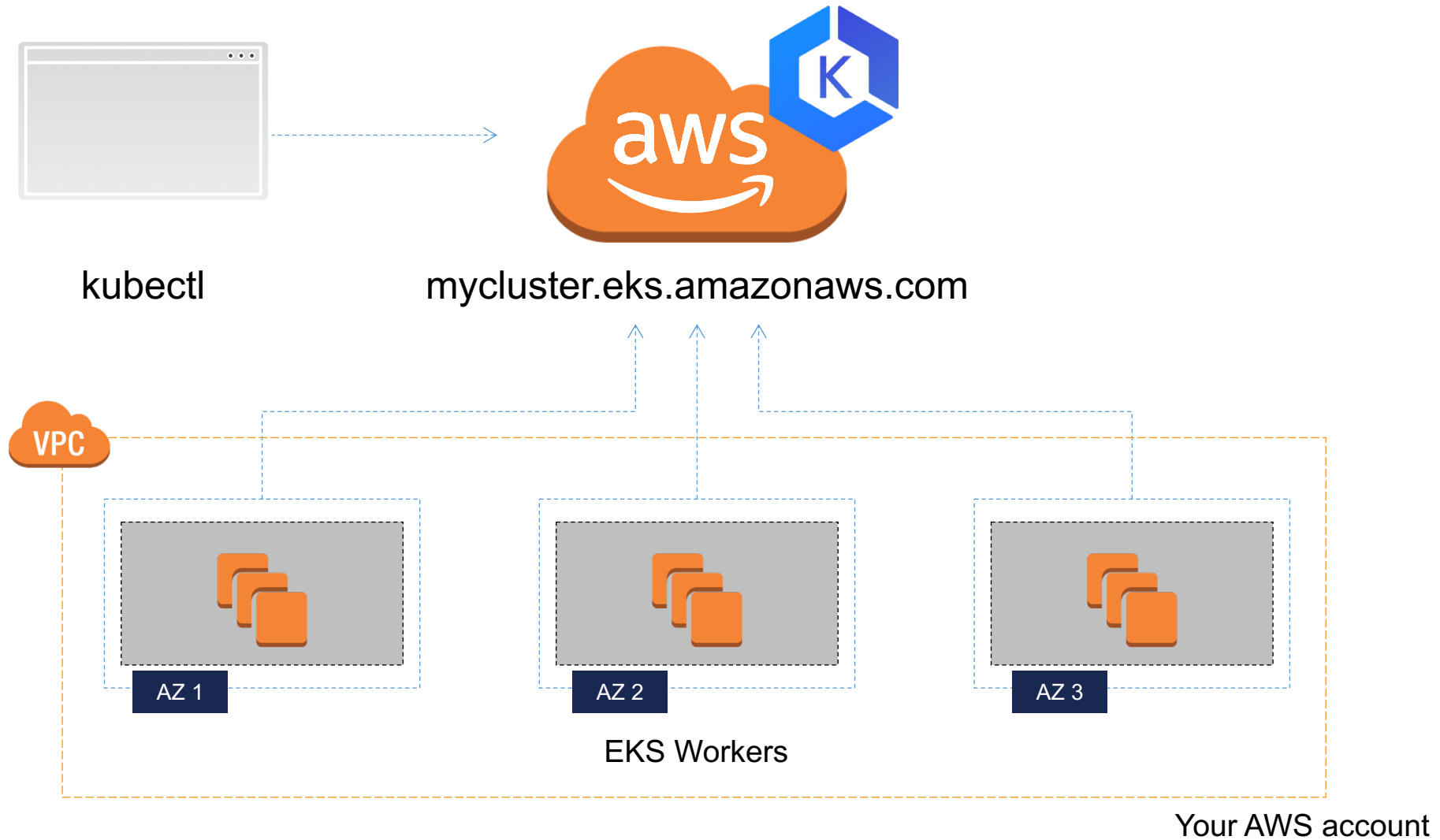


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EKS Architecture



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How do I provision EKS Worker Nodes?

Heptio IAM Authenticator

<https://github.com/heptio/authenticator>



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An open source approach to integrating
AWS IAM authentication with Kubernetes



heptio

IAM Authentication + Kubectl

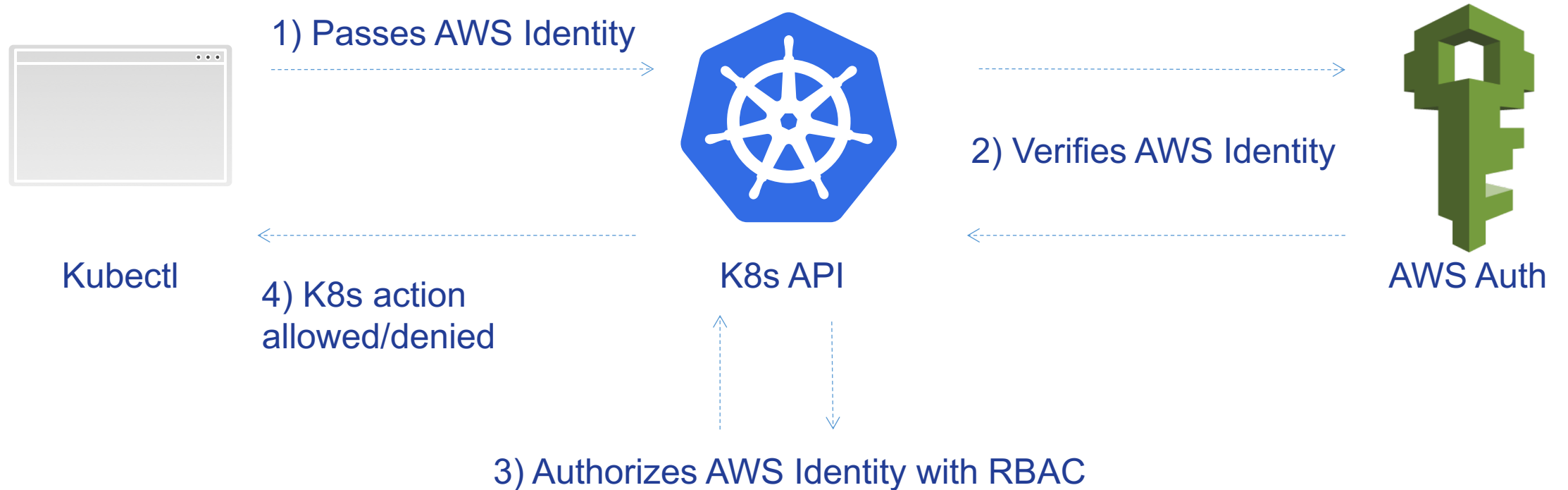


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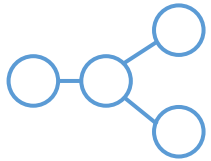
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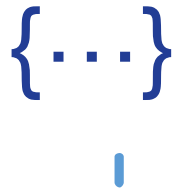
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IAM Auth Support == Upstream in 1.10



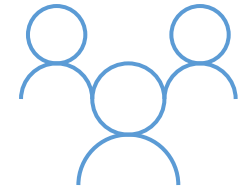
Native VPC networking
with CNI plugin



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



Simple, secure networking



Open source and
on Github

<https://github.com/aws/amazon-vpc-cni-k8s>



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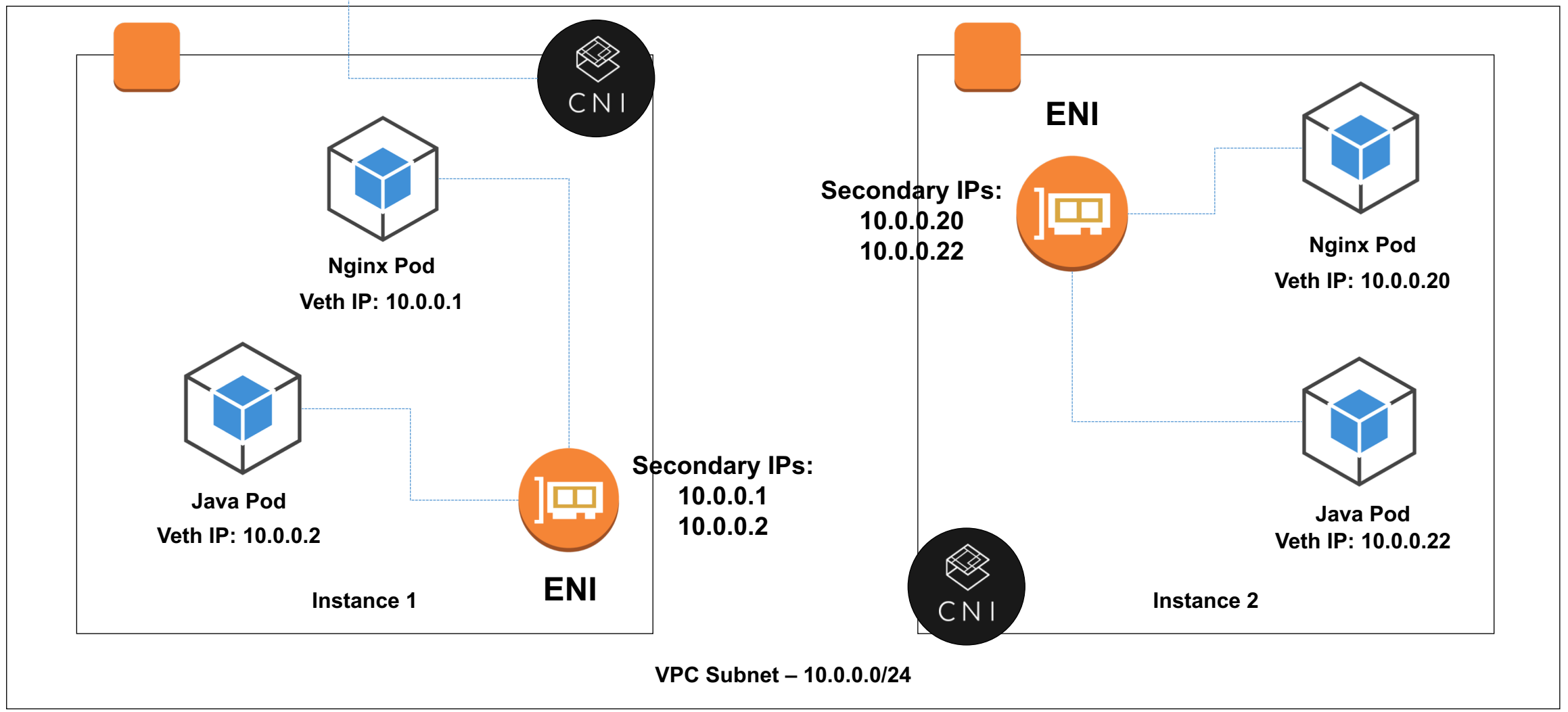


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ec2.associateaddress()





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EKS is Kubernetes Certified

Conformance Challenges:



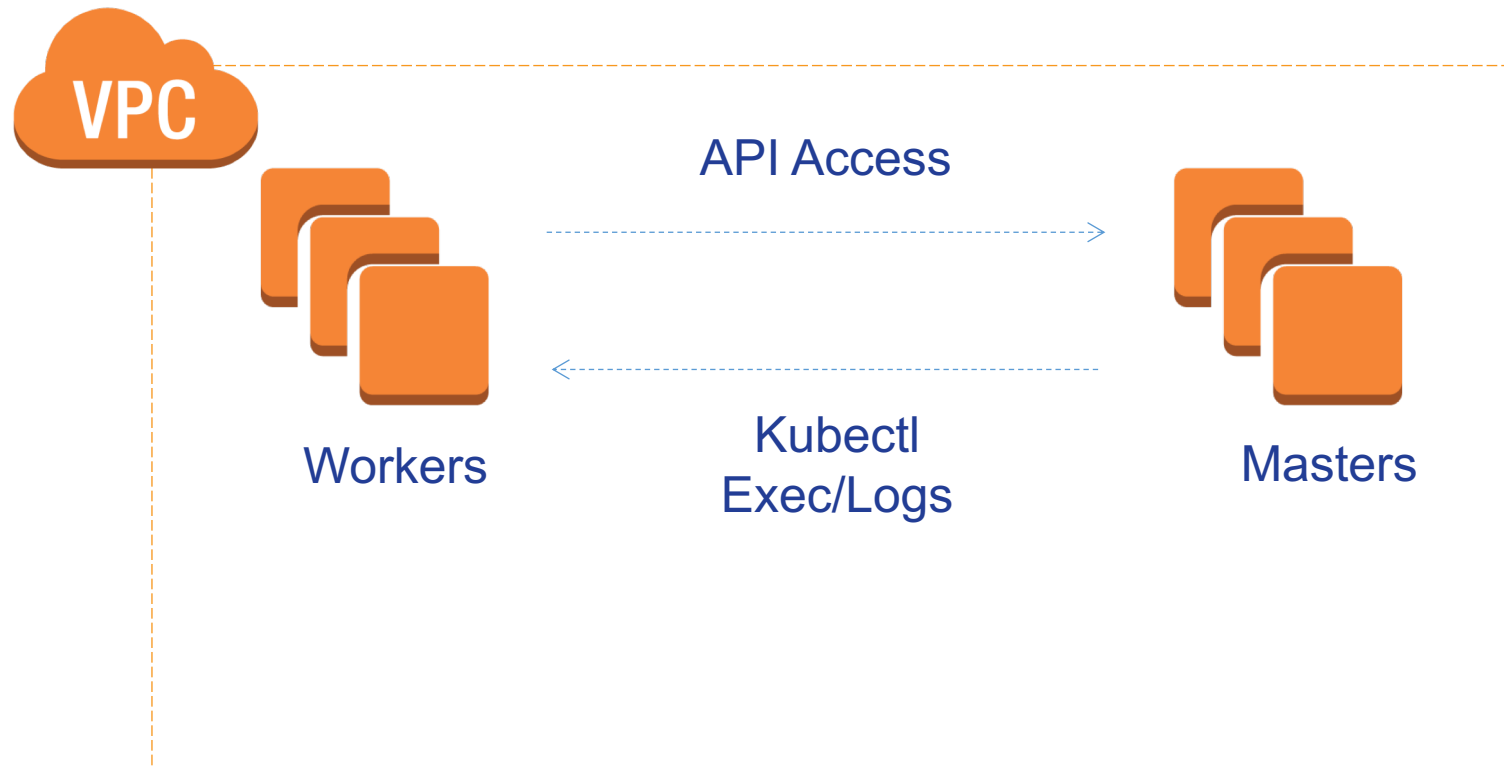
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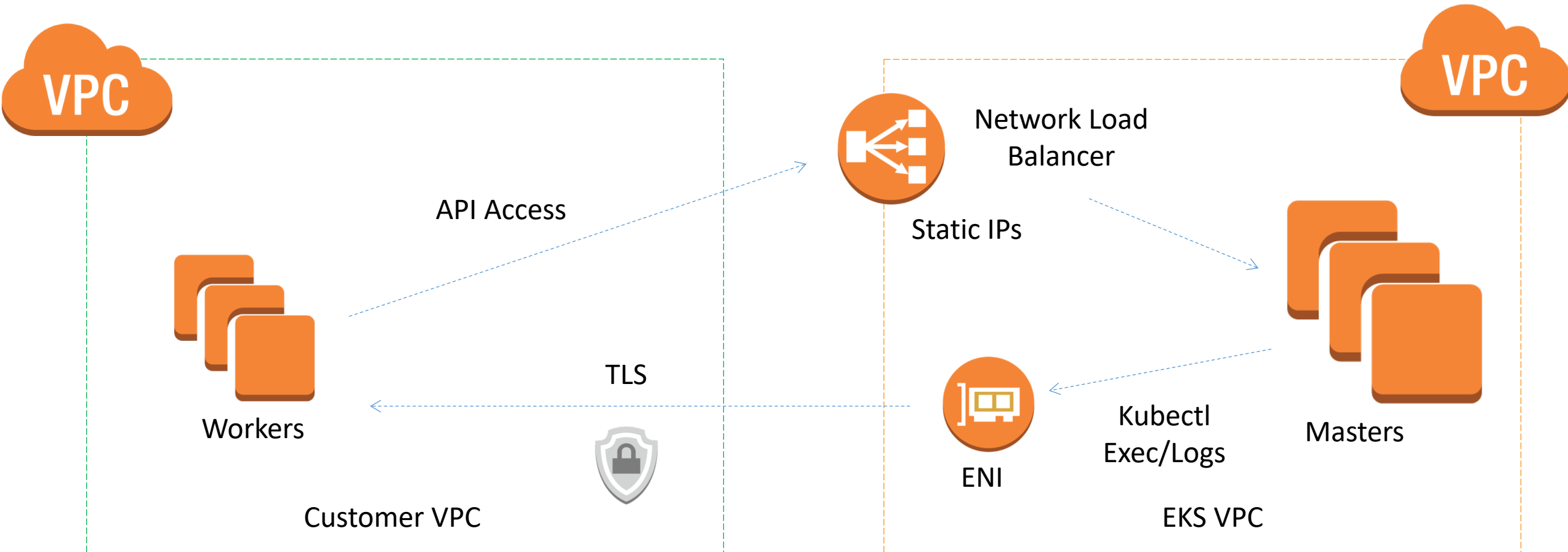
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Kubernetes assumes a single network for workers and masters



A different way: EKS Cross-Account Networking



EKS Cross-Account Networking: PKI and TLS

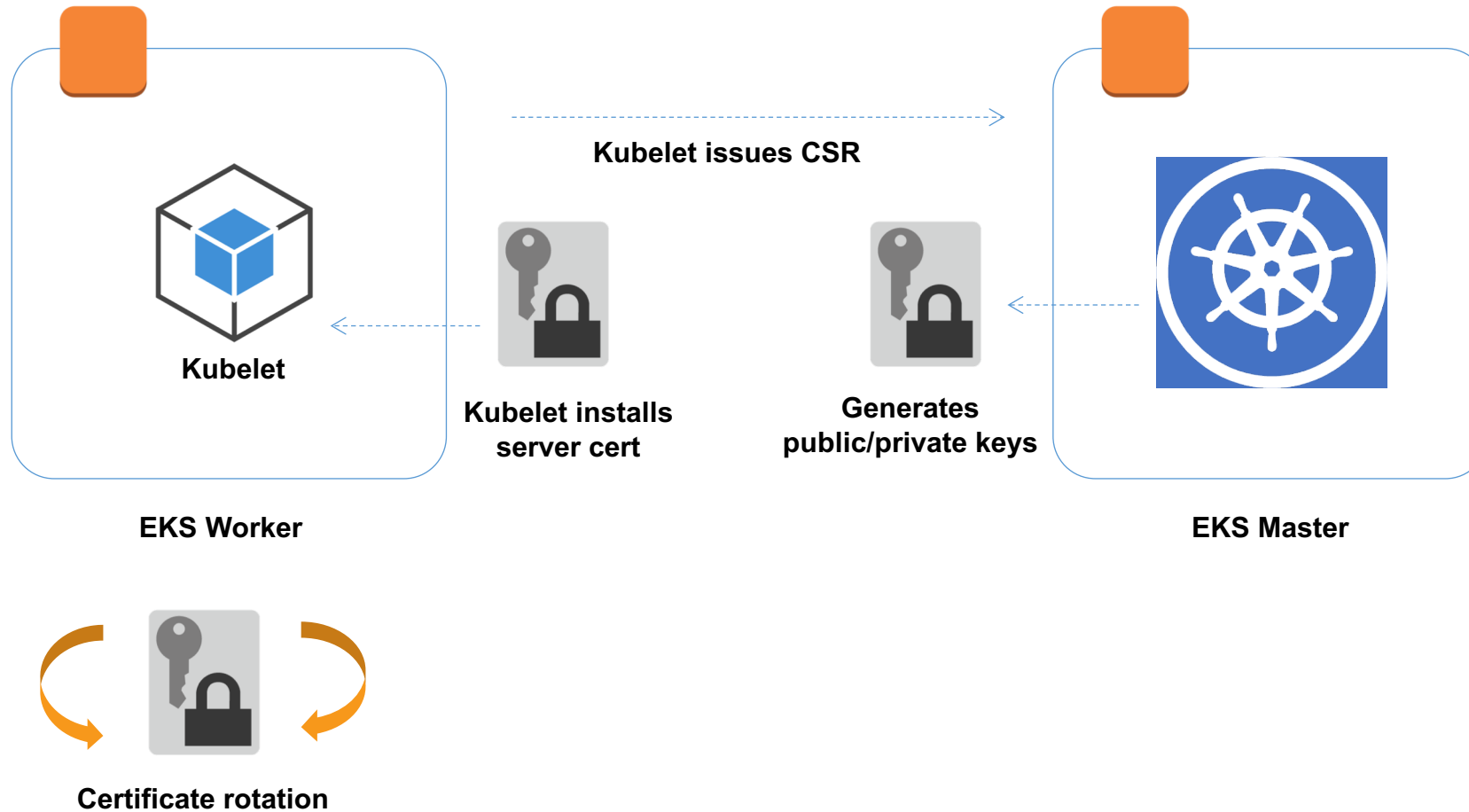


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Will \$(thing) work on EKS?



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Thank you!

aws.amazon.com/eks