



Amazon Elastic Container Service for Kubernetes (Amazon EKS)



About me...

- Meetup Organizer - Kubernetes & Cloud Native Computing Bulgaria; Ansible Bulgaria
- Kubernetes & Cloud Consultant
- Road Warrior & Car/Motorcycle Enthusiast

Why Amazon EKS



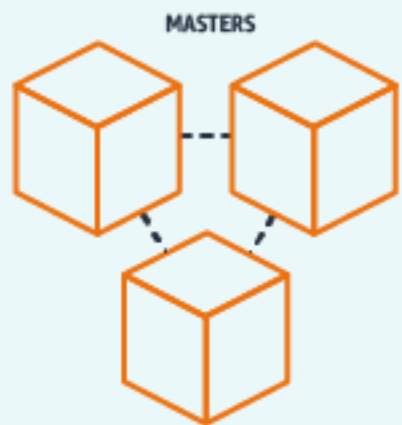
57% of Kubernetes Workloads run on AWS today - CNCF



What Offers ?

- Managed Kubernetes Control Plane
- Highly Available Cluster
- Manage the Upgrades of the Cluster
- Integration with some AWS services like :
CloudTrail, CloudWatch, ELB, IAM

EKS Flow



Provision an EKS cluster
EKS automatically deploys
Kubernetes masters



Deploy worker nodes
Add worker nodes to your
EKS cluster



Connect to EKS
Point your favorite
Kubernetes tooling at your
EKS cluster



Run Kubernetes apps
Deploy your Kubernetes
applications to your EKS cluster

Kubernetes Masters

- Amazon Creates Cluster for you
- Create HA master (auto scalable)
- Create HA etcd cluster
- IAM Integration (Heptio)
- Certificate Management
- Setup and ELB for the API server endpoint



Provisioning Worker Nodes

- <https://github.com/aws-labs/amazon-eks-ami>





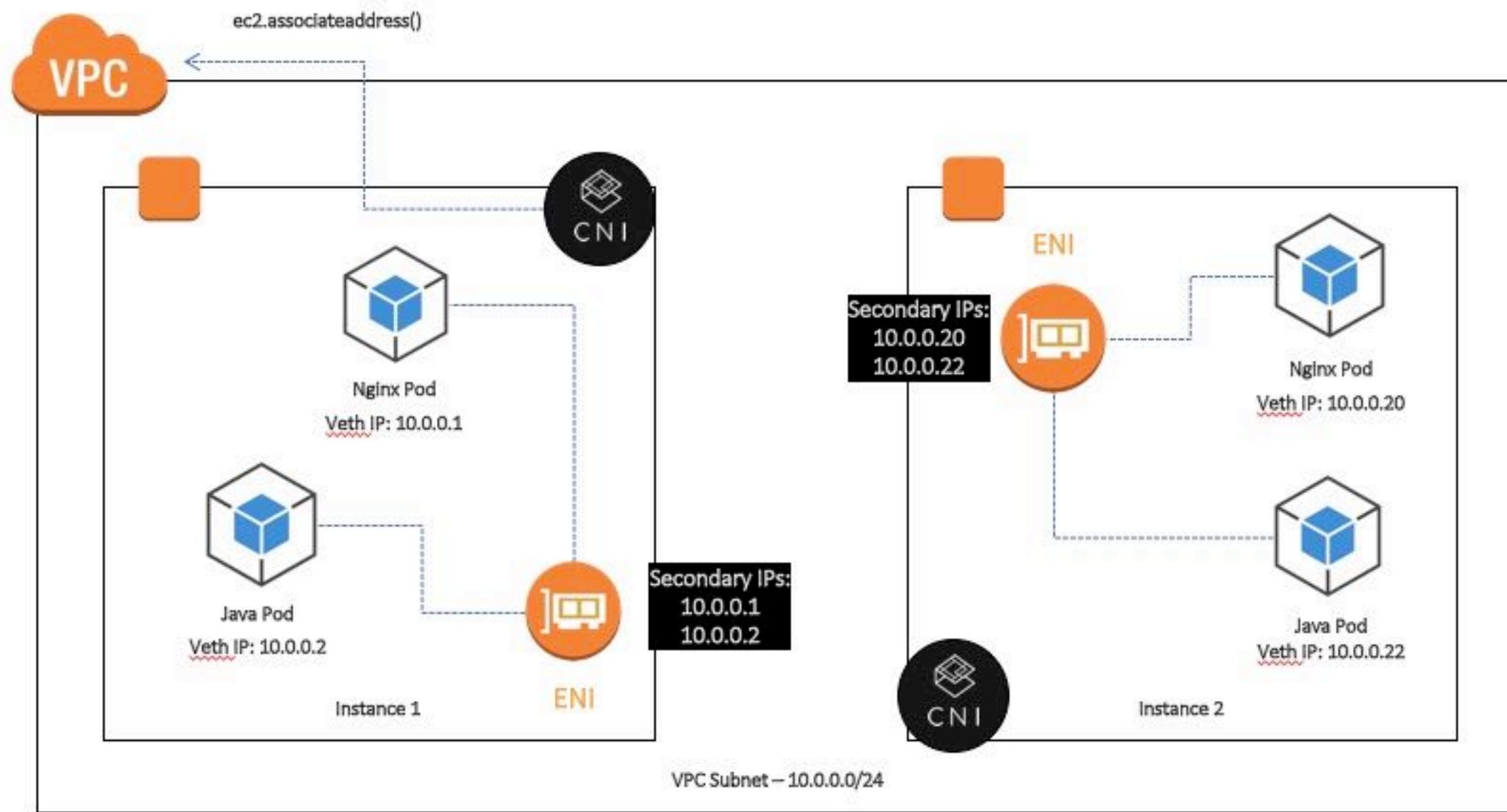
Kubernetes + IAM

- AWS native access management
- In collaboration with Heptio
- Kubectl and worker nodes
- Works with Kubernetes RBAC
- IAM Auth Support is Upstream in 1.10



Cross Account communication between Master and Worker Nodes

CNI Plugin



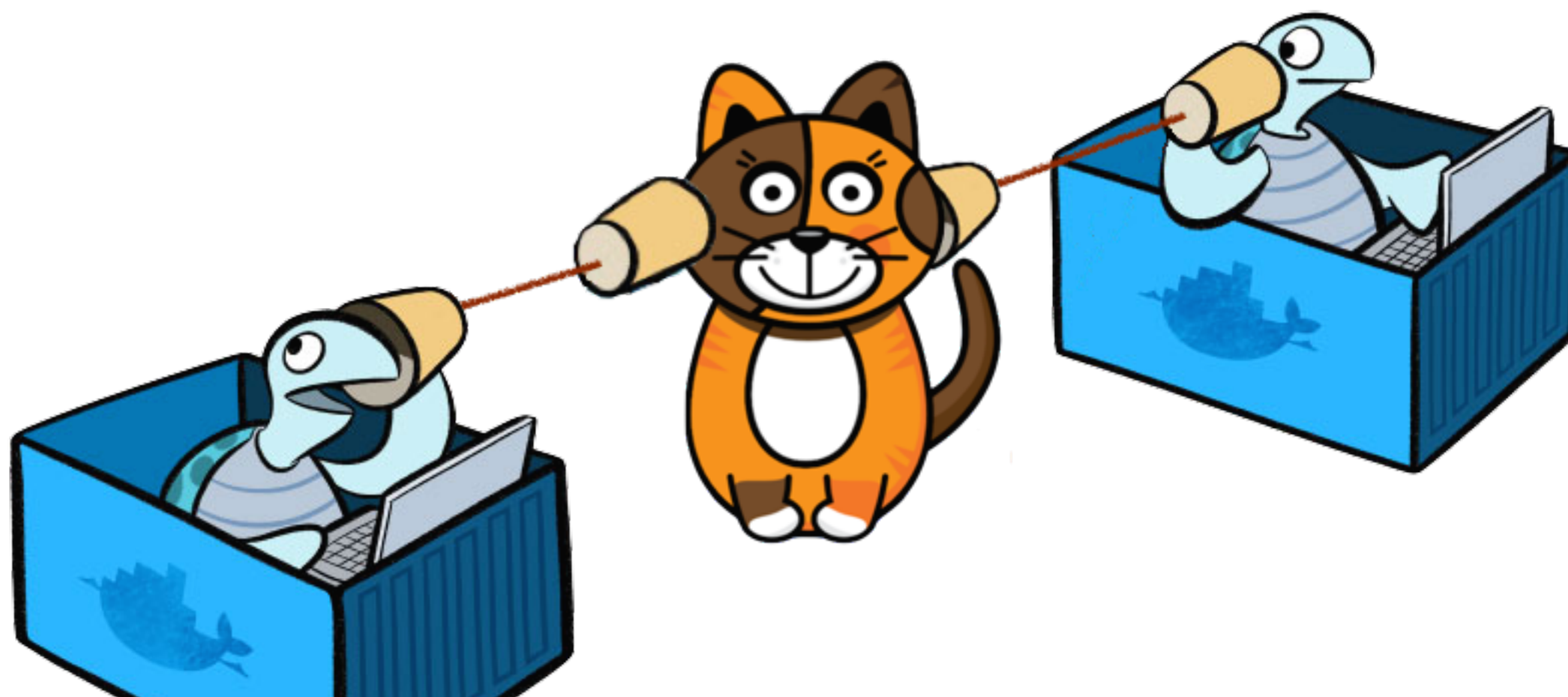


CNI Plugin

- <https://github.com/aws/amazon-vpc-cni-k8s>
- [https://github.com/aws/amazon-vpc-cni-k8s/
blob/master/pkg/awsutils/
vpc_ip_resource_limit.go](https://github.com/aws/amazon-vpc-cni-k8s/blob/master/pkg/awsutils/vpc_ip_resource_limit.go)



Calico



So how easy is to deploy Amazon EKS ?





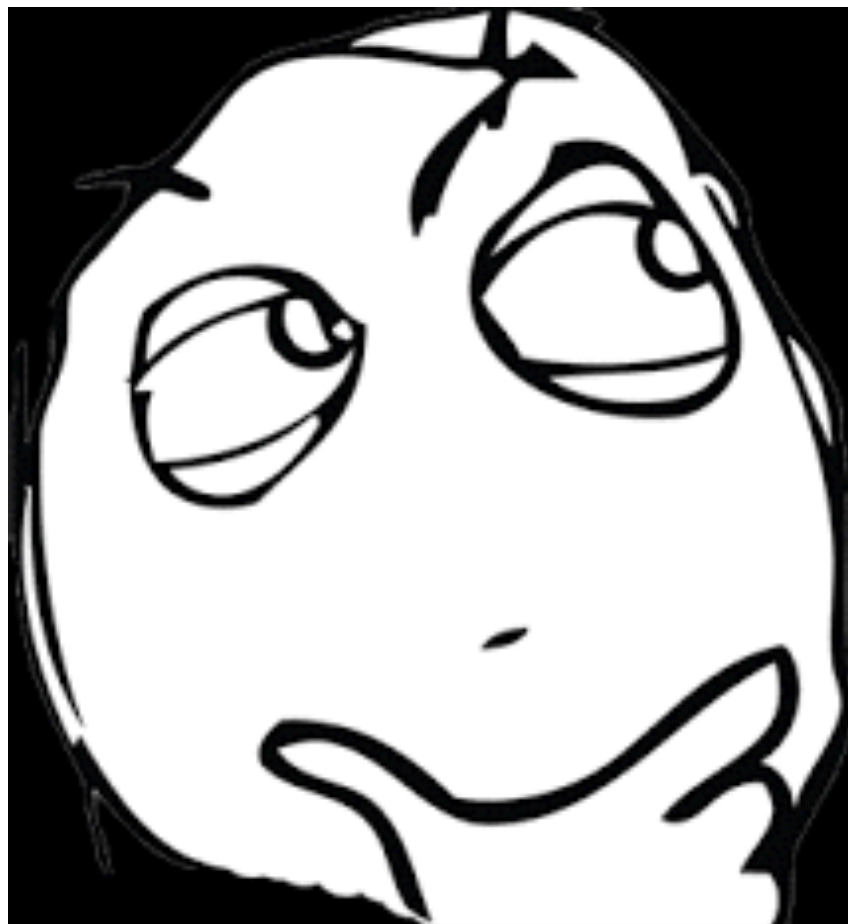
Prerequisites

- Latest Terraform (https://releases.hashicorp.com/terraform/0.11.7/terraform_0.11.7_darwin_amd64.zip)
- GoLang installed on your machine
- kubectl from AWS (<https://amazon-eks.s3-us-west-2.amazonaws.com/1.10.3/2018-06-05/bin/darwin/amd64/kubectl>)
- aws-iam-authenticator (`go get -u -v github.com/kubernetes-sigs/aws-iam-authenticator/cmd/aws-iam-authenticator`)

DEMO



Questions ?





Thanks for your time