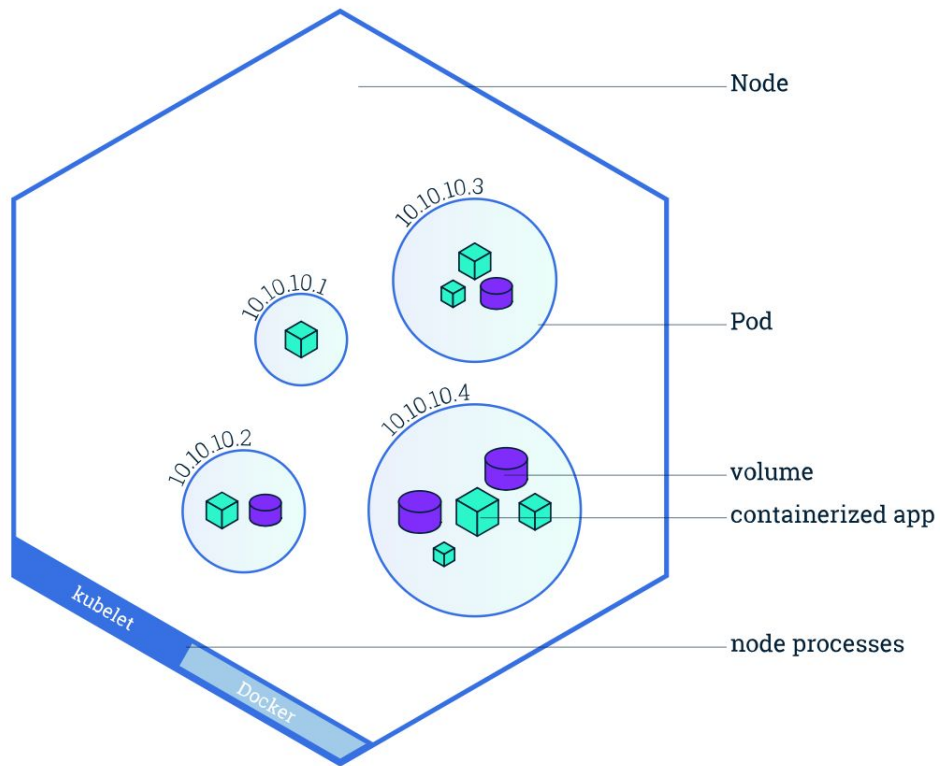**ThoughtWorks®**

K8S NETWORKING
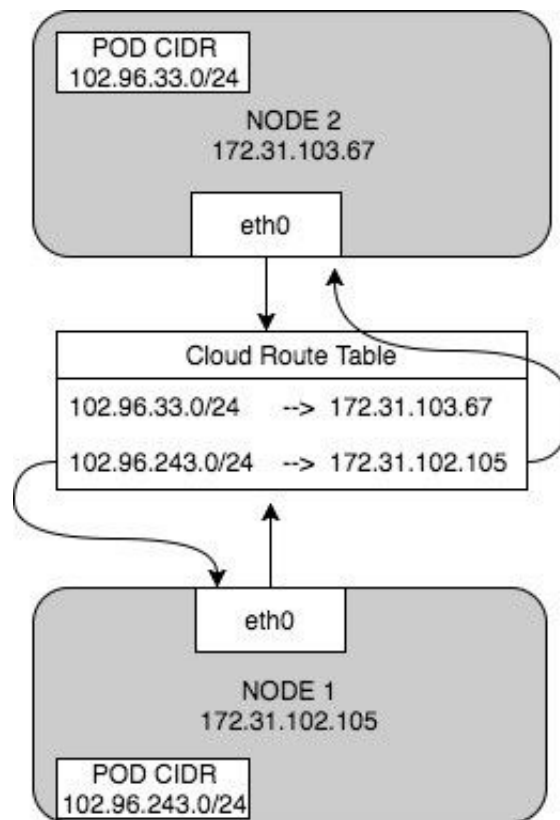
Rise of the Containers Workshop

The Fundamental Requirements

1. *All pods can communicate with all other pods without NAT.*

2. *All nodes can communicate with all pods (and vice-versa) without NAT.*

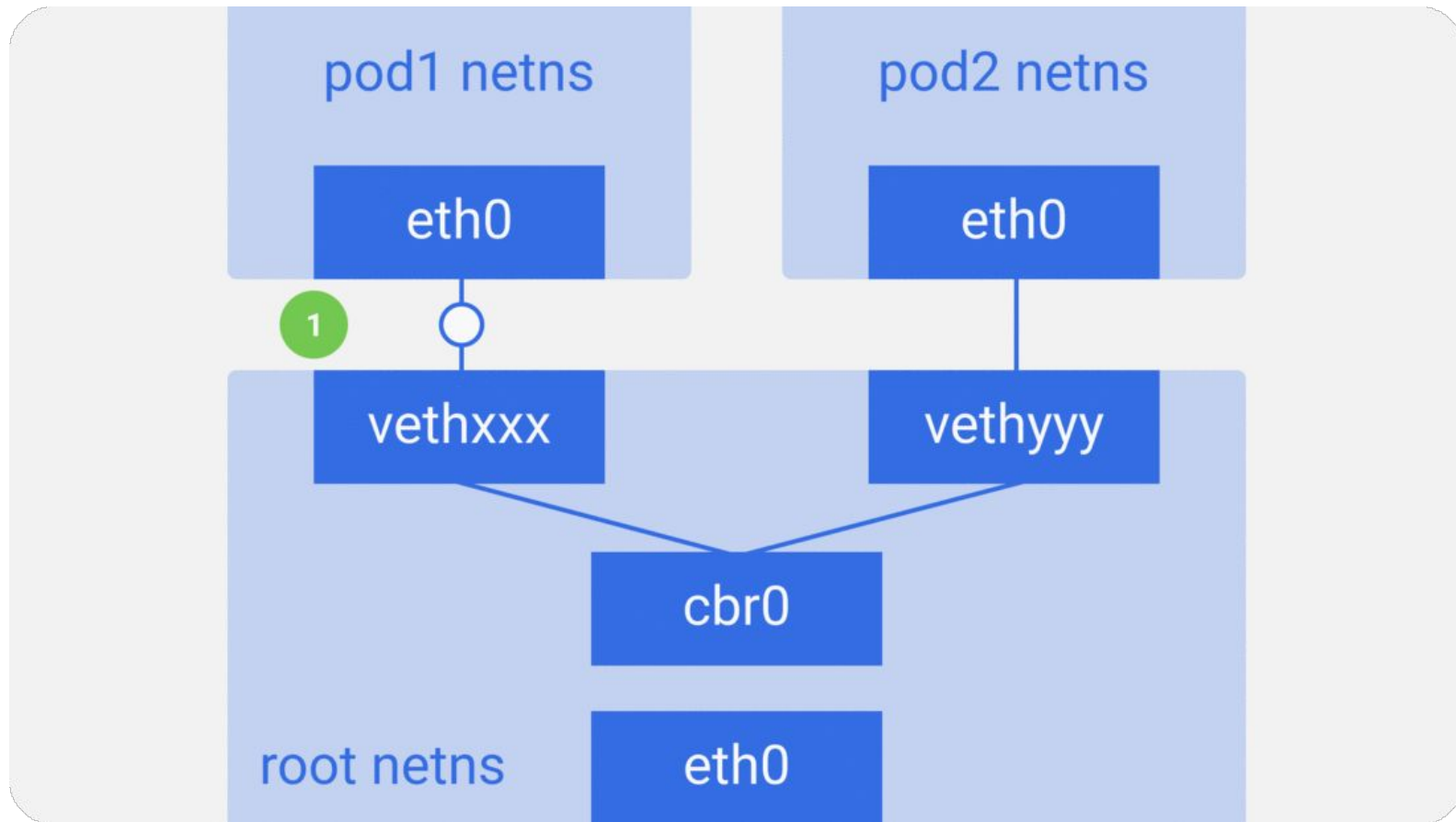3. *The IP that a pod sees itself as is the same IP that others see it as.*
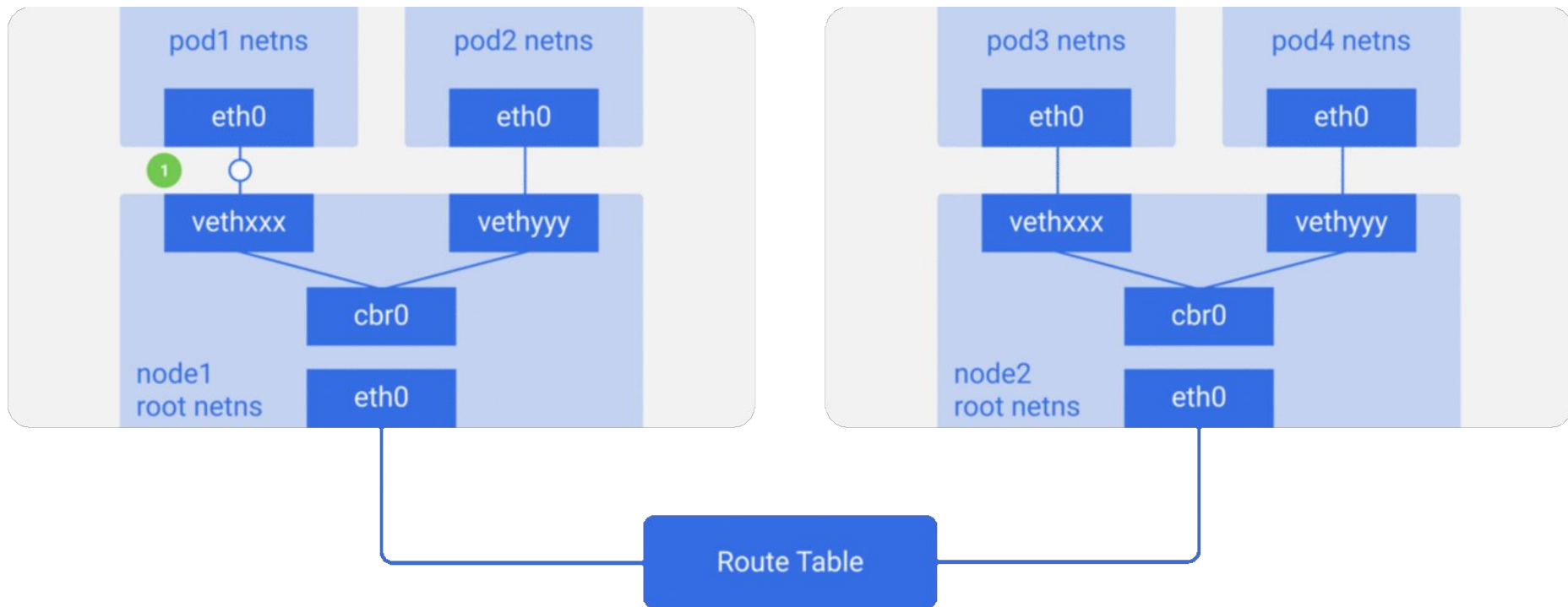
Every Pod has a unique IP.

3

The Cluster Network

Intra Node Networking

Inter Node Networking

Demo

K8S Cluster on AWS

Node CIDR Blocks

Pod CIDR Blocks

Simple communication thumb rules

1. *Containers within pod can talk to each other over localhost*

2. *Pods across nodes can talk to each other via Pod IP*

3. *Nodes can talk to Pods via Pod IP (and vice-versa)*

4. *One namespace Pods can not see other namespace Pods (Access Control)*

5. *Outside world can reach via Ingress → Services*

THANK YOU

For questions or suggestions:

Kulvinder Singh

kulvinds@thoughtworks.com