AWS
re:Invent

CON214-S

Policy-based management of hundreds of Kubernetes clusters

Eryn Muetzel

Director, Product Management
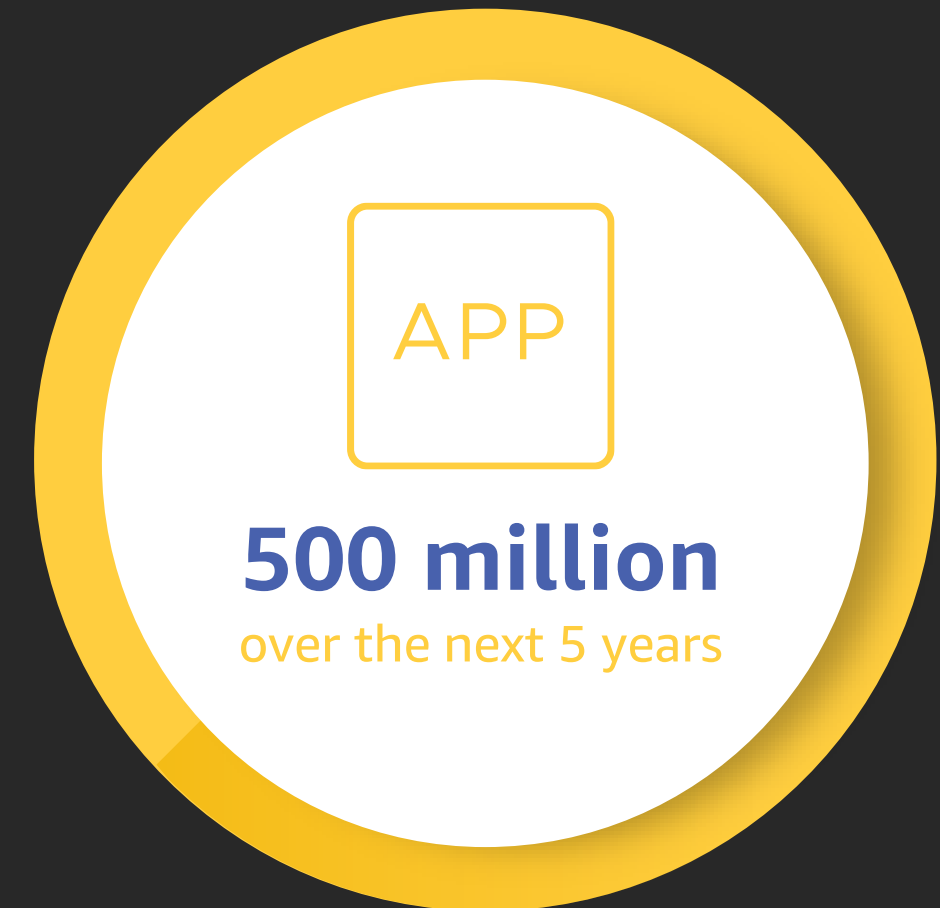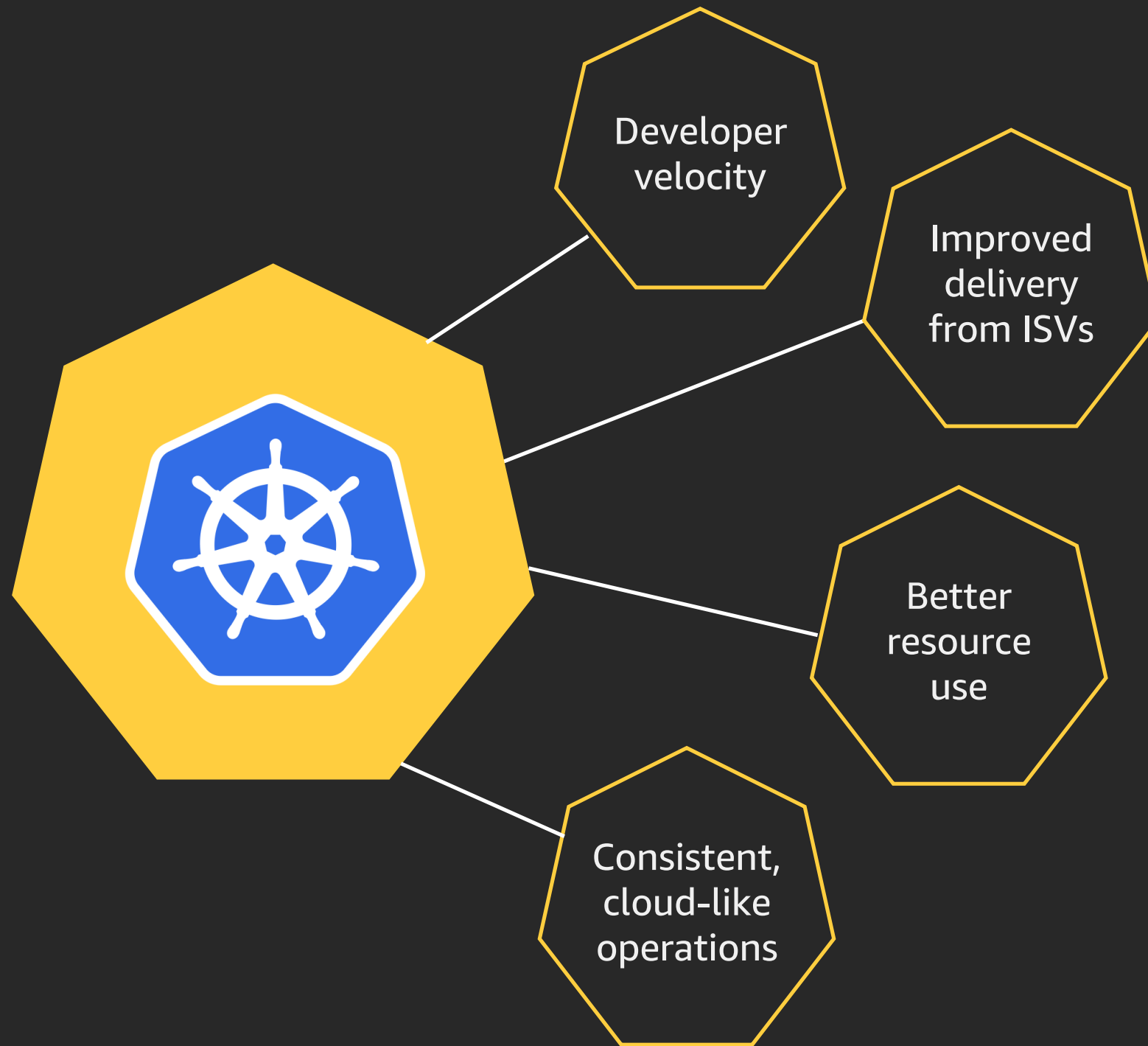
VMware

Megan Bruce

Senior Manager,
Product Marketing

VMware

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Agenda

- Challenges of adopting Kubernetes in a fragmented, hybrid cloud environment

- How VMware is solving these challenges

- Demo: VMware Tanzu Mission Control

- Making the best use of Kubernetes with VMware and AWS

- Wrap-up and additional resources

Kubernetes: Bridging the world of dev and ops

Developer velocity

Improved delivery from ISVs

Better resource use

Consistent, cloud-like operations

APP

500 million
over the next 5 years

The promise of Kubernetes

Consistent ops across environments and teams

Amazon Web Services

VMware vSphere

Amazon EKS

VMC on AWS

Amazon EKS

IT's growing reality: Fragmentation

Security
IAM $$$

Amazon Web Services

Security
IAM $$$

VMware vSphere

Security
IAM $$$

Amazon EKS

Security
IAM $$$

VMC on AWS

Security
IAM $$$

Amazon EKS

- Manual configuration and management, siloed by environment

- Access, networking, security policies applied cluster-by-cluster

- Lack of cost visibility and control

More data centers, environments add ops burden
Multiple steps, manual updates
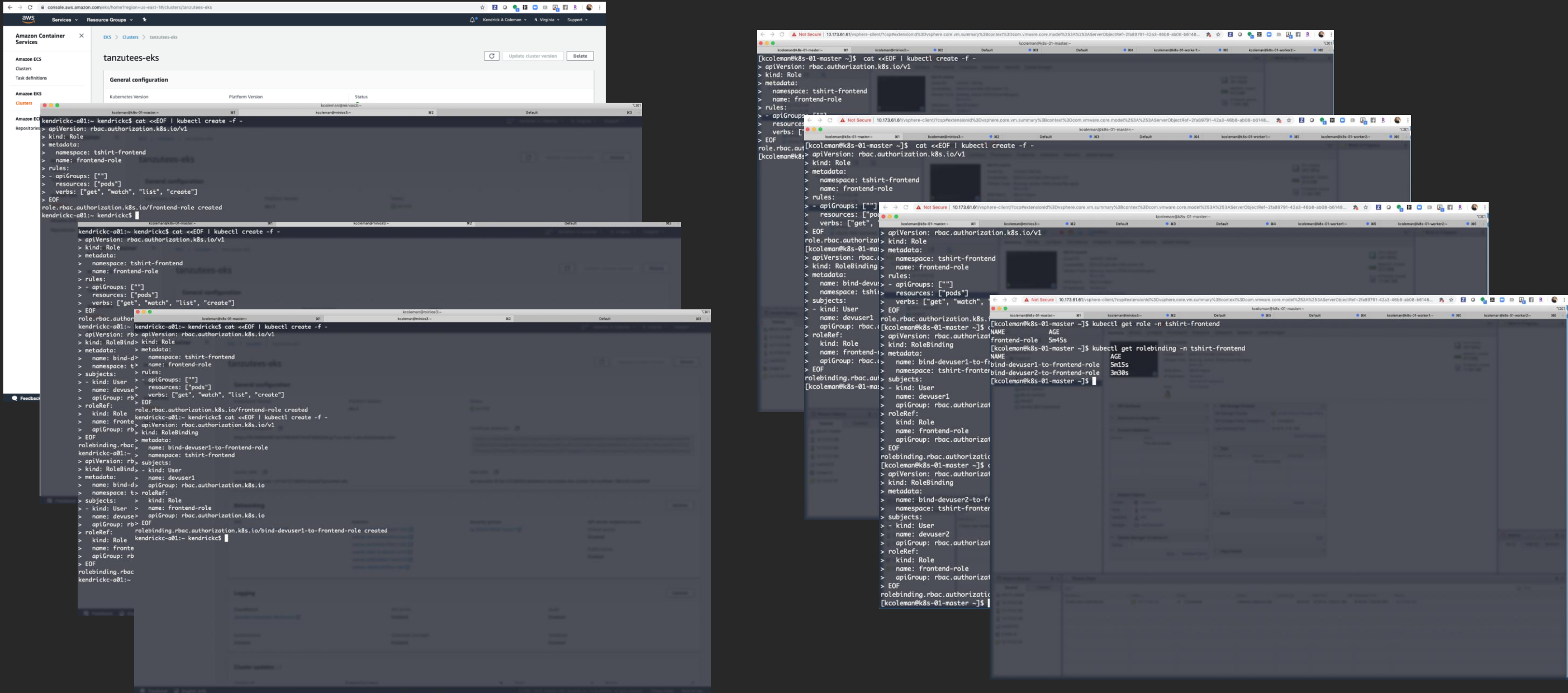
More modern apps means more clusters to manage

APP

500 million

over the next 5 years

Introducing VMware Tanzu

Build, run, and manage modern apps

Build

Modern Applications

Existing | COTS | Cloud Native

Run

Kubernetes Grid

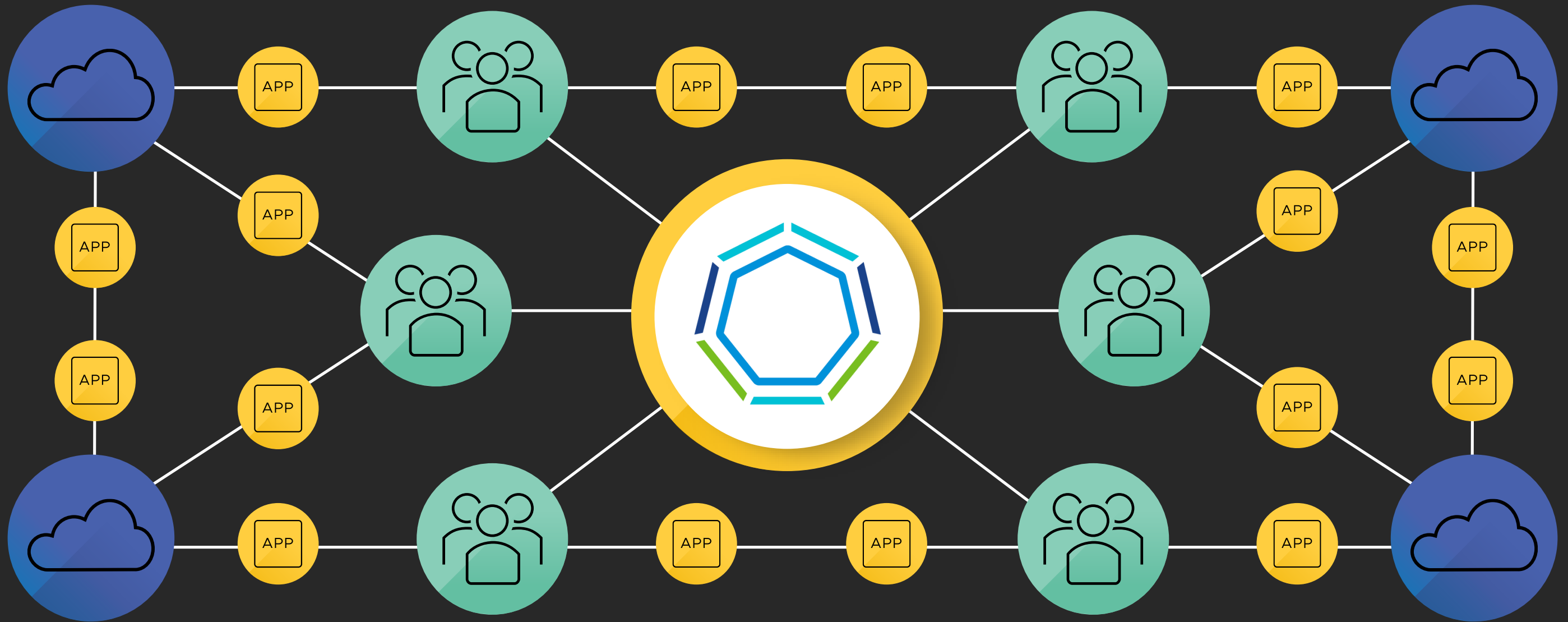On Premises | Public Cloud | Edge

Manage
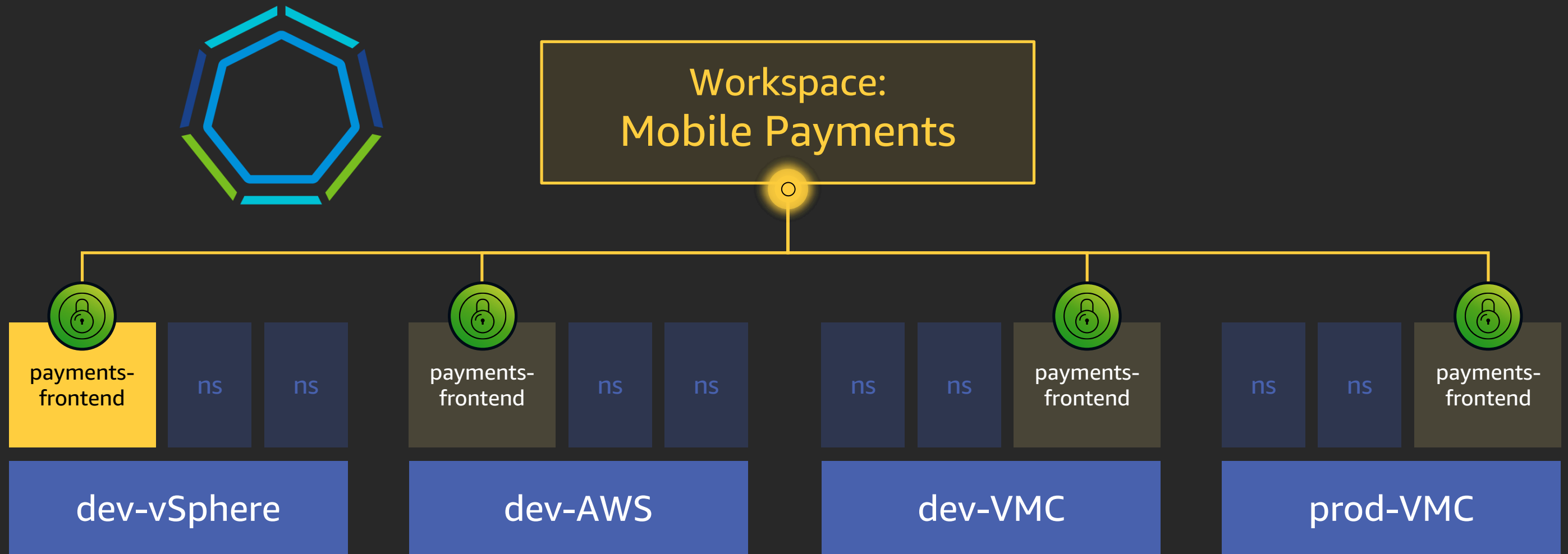
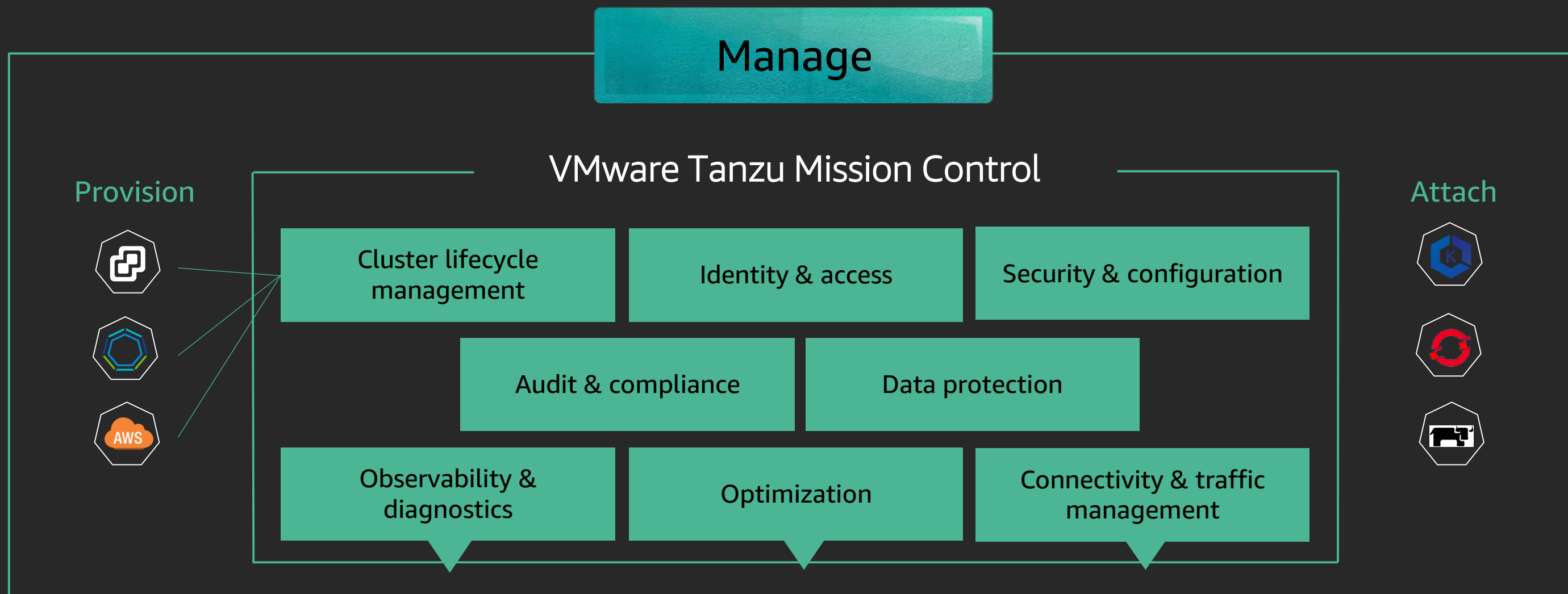**Single Control Point**

Multi-Environment
Multi-Cluster
Multi-Team

Demo

aws

Solve for fragmentation—without limiting choice

Simplify operations across environments, for enterprise scale

Workspace:
Mobile Payments

payments-frontend
ns
ns

payments-frontend
ns
ns

ns
ns
payments-frontend

ns
ns
payments-frontend

dev-vSphere

dev-AWS

dev-VMC

prod-VMC

Multi-cluster and multi-team management

Manage

Provision

Attach

VMware Tanzu Mission Control

Cluster lifecycle management	Identity & access	Security & configuration

Audit & compliance	Data protection

Observability & diagnostics	Optimization	Connectivity & traffic management

WAVEFRONT by **vmware**®

CloudHealth by **vmware**®

NSX–Service Mesh

Manage Kubernetes using open-source technologies

SONOBUOY

VELERO
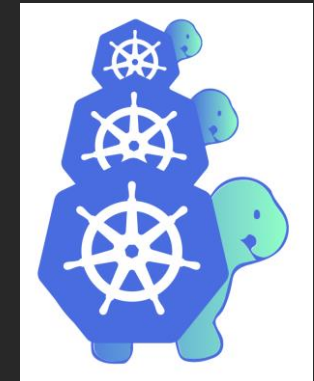
CONTOUR

Cluster API

Validate your Kubernetes configuration

Back up and migrate Kubernetes resources and persistent volumes
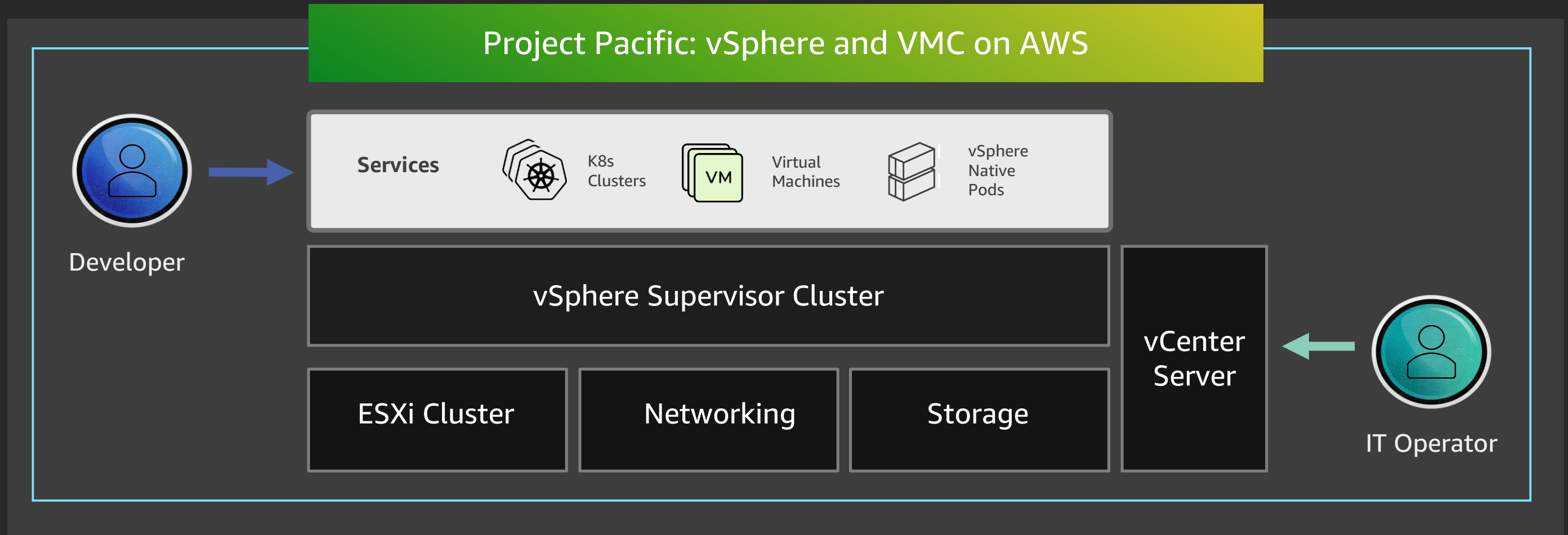
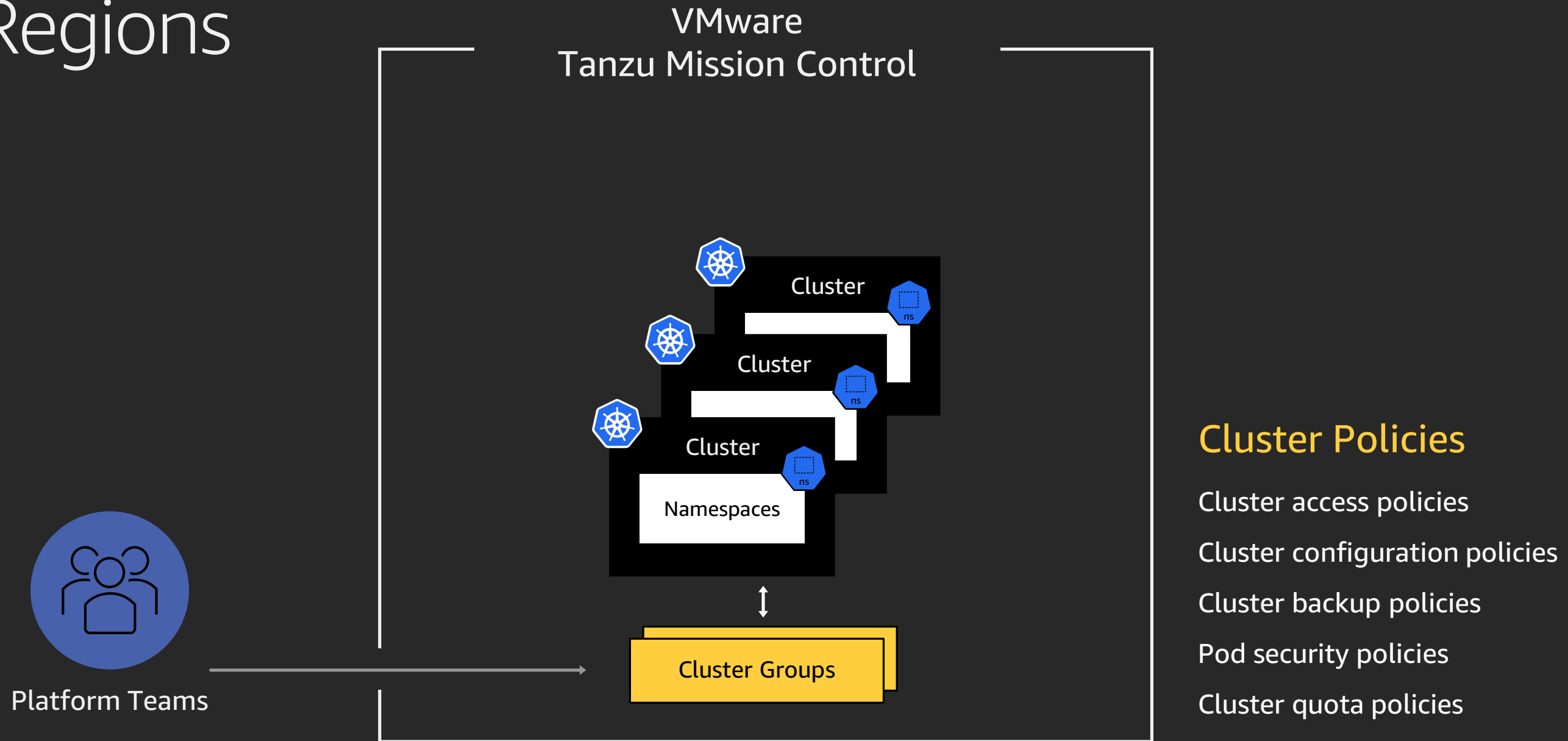Handle **multi-team ingress** and advanced traffic routing

Manage **cluster lifecycle** with declarative, Kubernetes-style APIs

VMware and AWS: Start where you are to adopt Kubernetes

AWS re:Invent
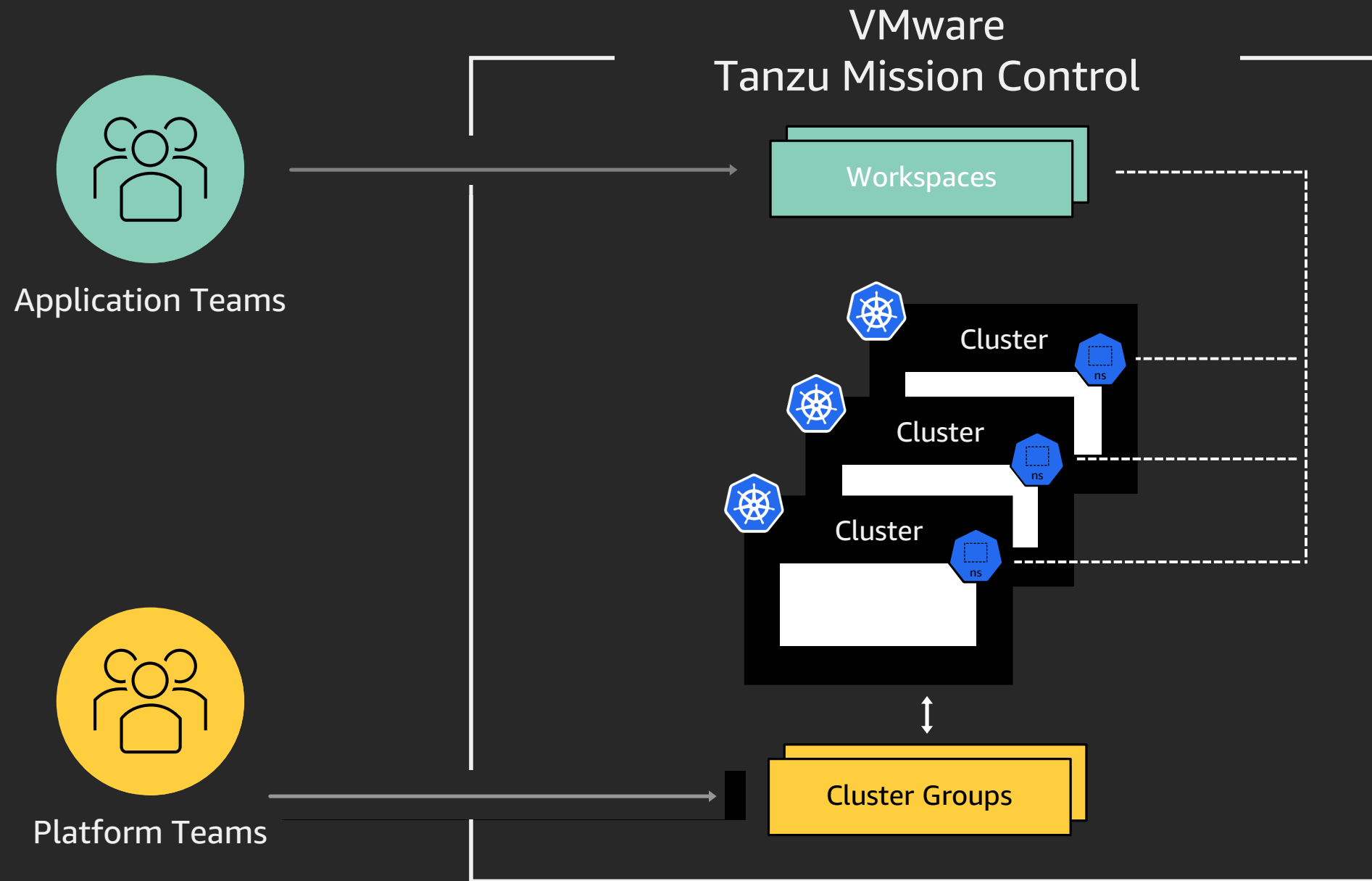
aws

1. Modernize your infrastructure

Project Pacific: vSphere and VMC on AWS

Developer

Services

K8s Clusters

VM Virtual Machines

vSphere Native Pods

vSphere Supervisor Cluster

vCenter Server

ESXi Cluster

Networking

Storage

IT Operator

2. Secure clusters across data centers and AWS Regions

VMware
Tanzu Mission Control

Cluster

Cluster

Cluster

Namespaces

Cluster Groups

Platform Teams

Cluster Policies

Cluster access policies

Cluster configuration policies

Cluster backup policies

Pod security policies

Cluster quota policies

3. Onboard your application teams

VMware
Tanzu Mission Control

Application Teams

Platform Teams

Workspaces

Cluster

Cluster

Cluster

ns

ns

ns

Cluster Groups

Workspace Policies

Namespace access policies

Namespace configuration policies

Namespace backup policies

Network policies

Namespace quota policies

Cluster Policies

Cluster access policies

Cluster configuration policies

Cluster backup policies

Pod security policies

Cluster quota policies

4. Manage, operate, and scale

Configuration
management

Back up, restore,
and migrate

**Tanzu
Mission
Control**

Observability and
troubleshooting

Centralized
lifecycle
management

Learn more

Watch TGIK

Joe Beda and special guests dig into community projects and topics every Friday at 1PM PT
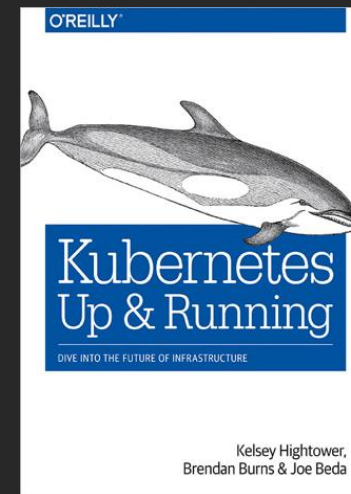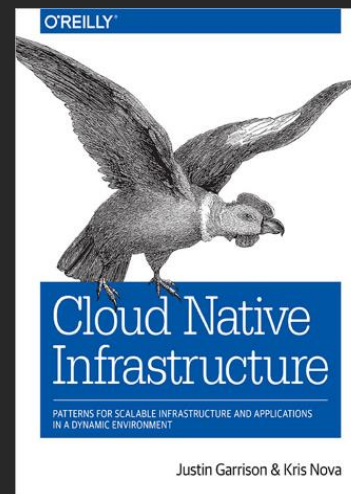
Visit KubeAcademy

Access free, on-demand training on Kubernetes fundamentals at **kube.academy**

Read eBooks

Our team has co-authored
- *Kubernetes Up and Running*
- *Cloud Native Infrastructure*
- *Managing Kubernetes*

Stay Connected

@cloudnativeapps
@vmwopensource

cloud.vmware.com/tanzu

Let's talk

Join us at the **VMware booth (#2108)** for a 1x1 demo and more info about VMware Tanzu, and learn how to use these solutions across your hybrid cloud environment with VMware and AWS

VMware Tanzu

Thank you!

Eryn Muetzel and Megan Bruce

muetzele@vmware.com
meganb@vmware.com

aws

Please complete the session survey in the mobile app.