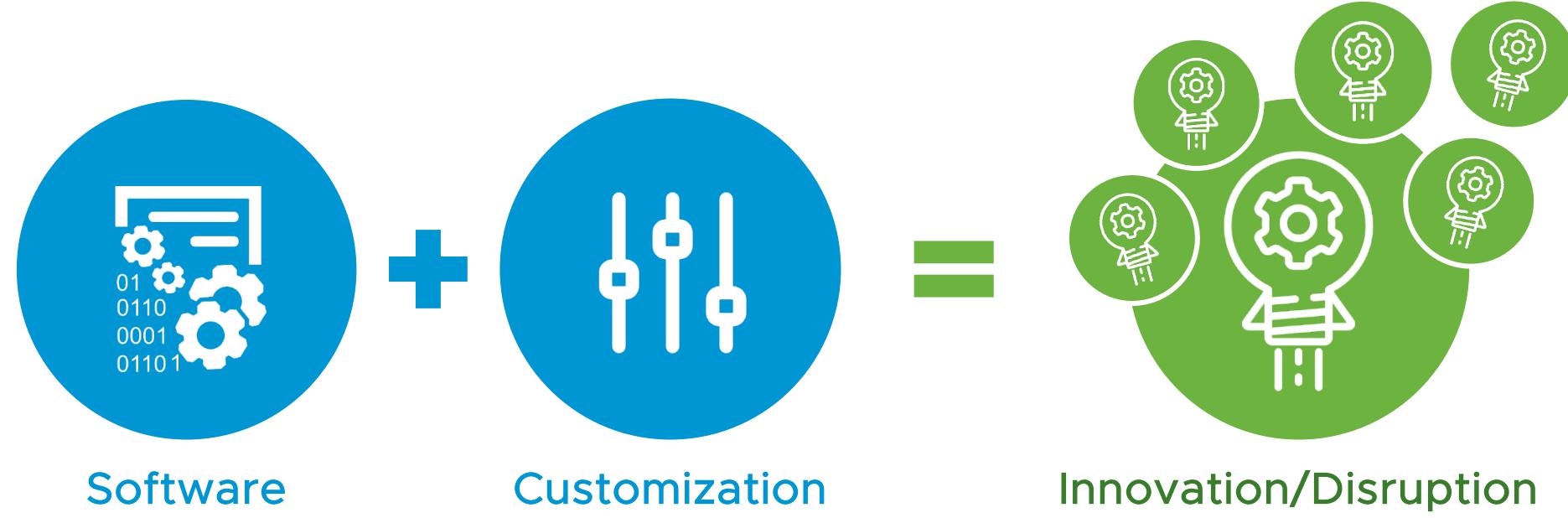


Container Portfolio at VMware

淡成

VMware应用平台架构师

Application Velocity and Customization Drive Competitive Advantage



Container Technology

Key Enabler for Modern Application Development

Fast



Create
Environments
Rapidly

Light



Minimal Resources
Needed

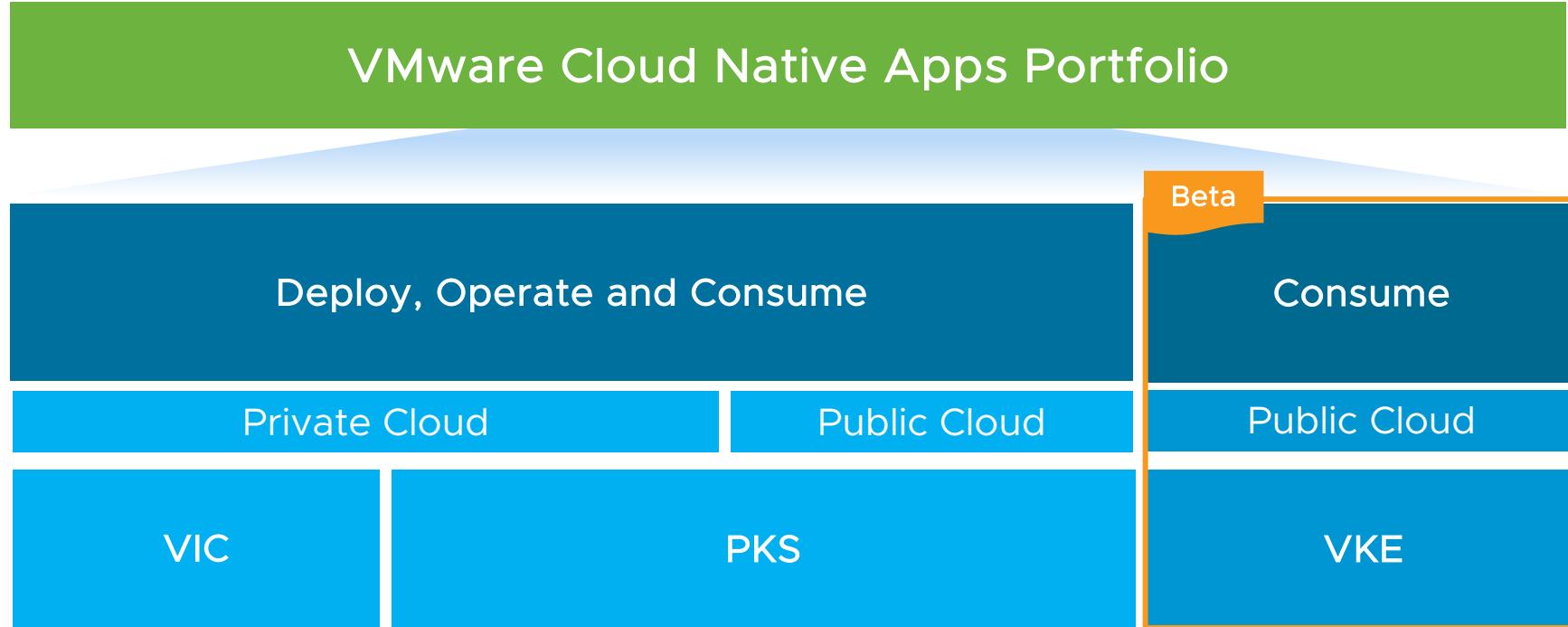
Portable



Moves from
Dev/Test to
Production
Consistently

VMware Cloud Native Apps Portfolio

Meeting customers wherever they run their apps on any infrastructure



vSphere Integrated Containers (VIC)

vSphere Integrated Containers – Enabling the Best of Both Worlds



FOR DEVELOPERS:

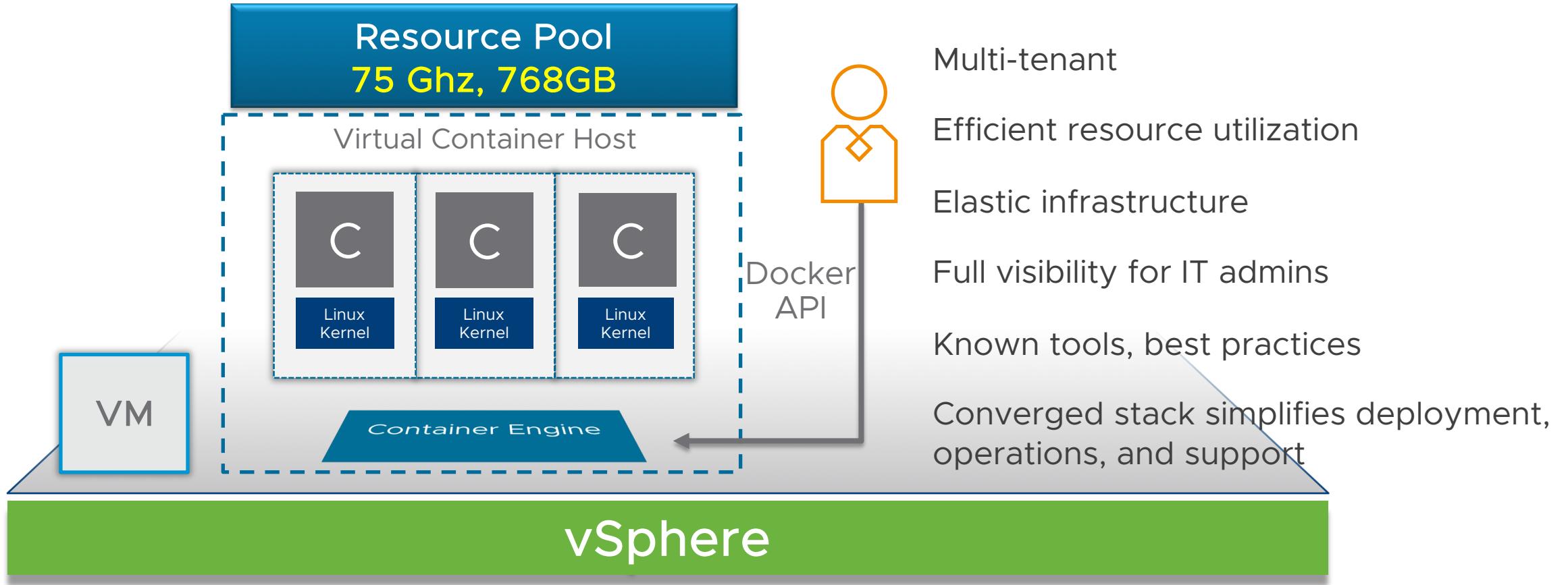
- Docker compatible interface
- Container management portal
- Enterprise-class container registry



FOR OPERATIONS:

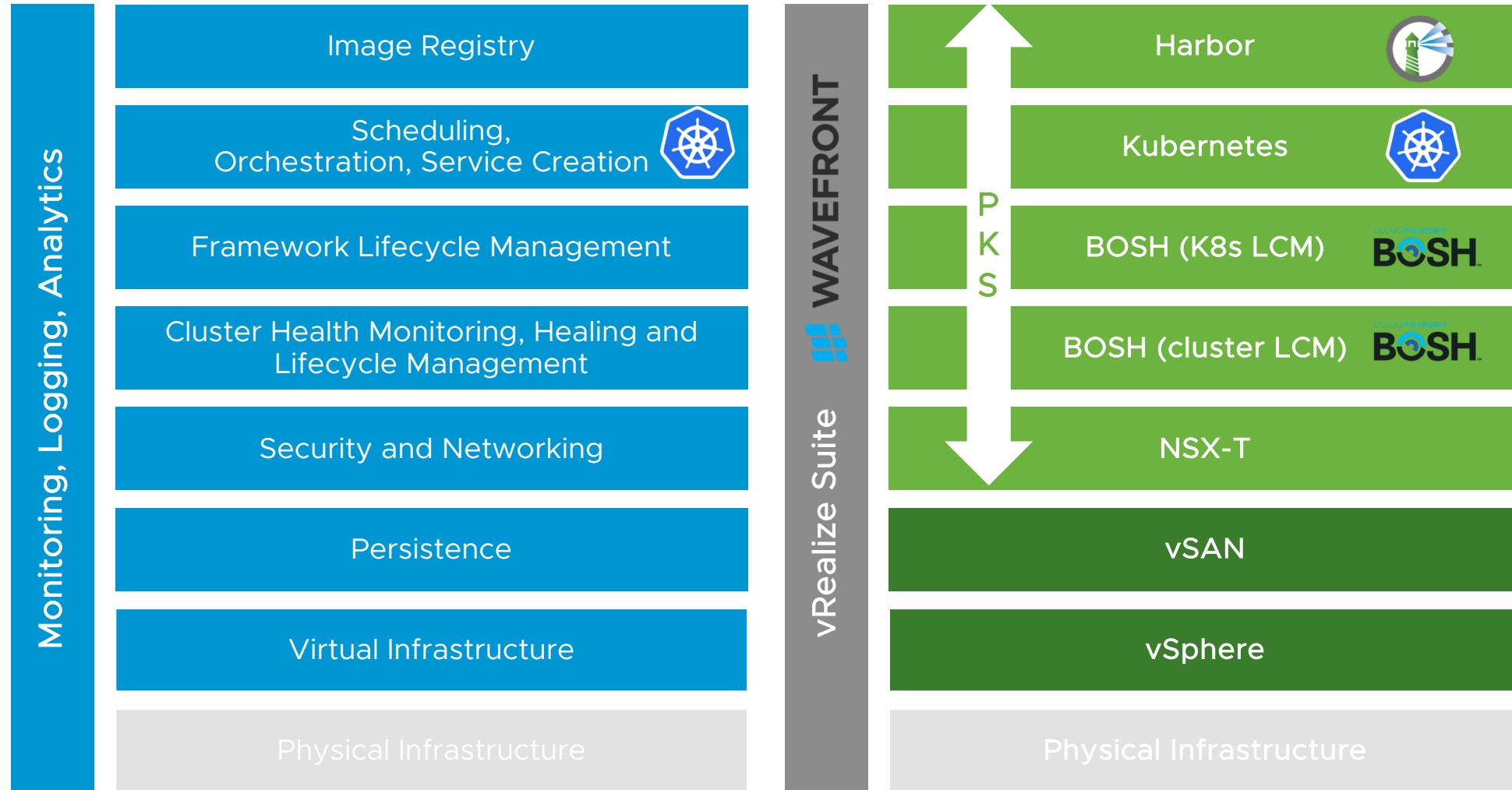
- Familiarity of vSphere
- No new tooling or technologies
- Full enterprise-grade power of Software-Defined Data Center

vSphere Integrated Containers Approach



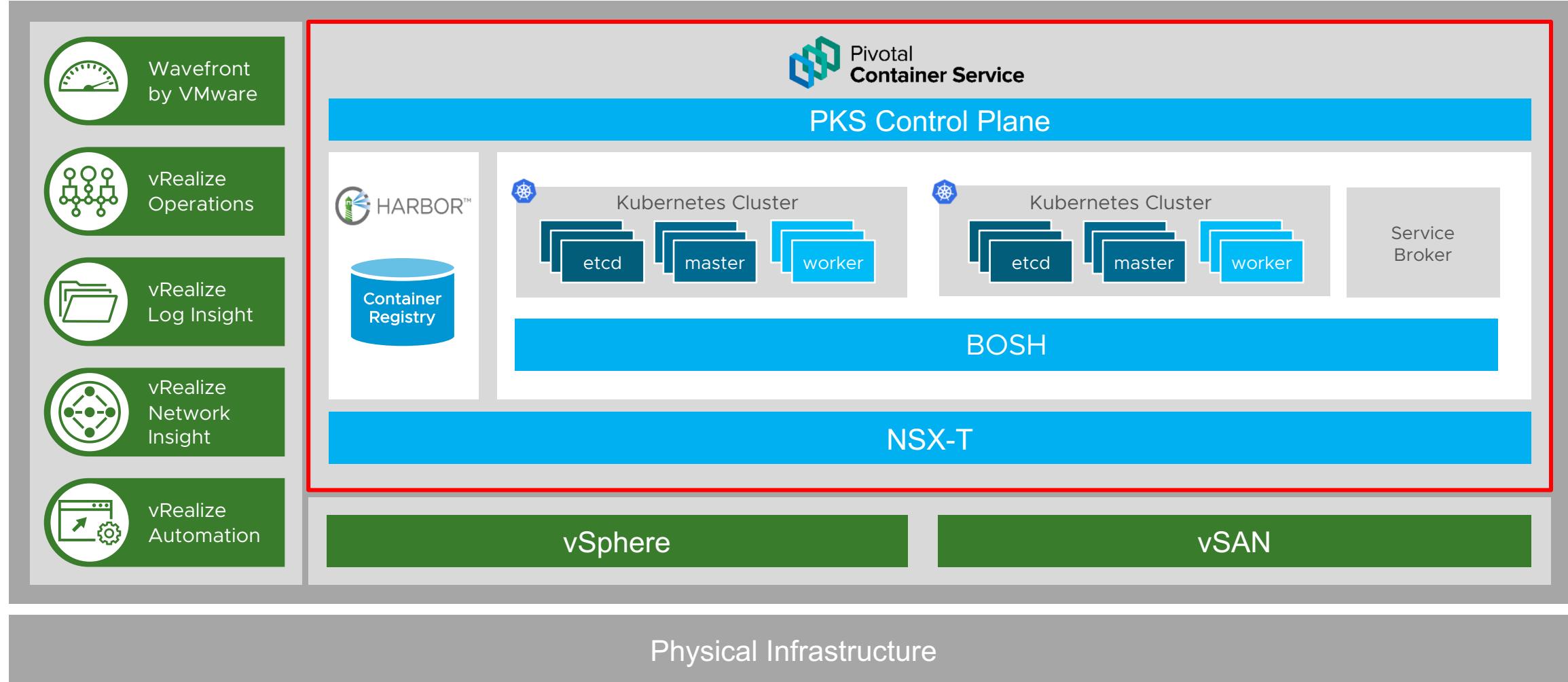
Pivotal Container Service (PKS)

Kubernetes Is Only One Layer of the Container Service Stack



PKS on VMware SDDC

Rapidly deliver and operationalize next-generation apps

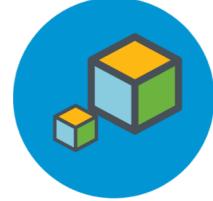


PKS – Solving Day 2 Operational Challenges



High Availability

Fault-tolerance for masters, workers, and etcd nodes



Scaling

Auto-scaling of masters, workers, and etcd nodes



Health Checks & Healing

Routine health checks and self-healing of cluster



Lifecycle Management

LCM includes rolling upgrades to ensure workload uptime

Pivotal Container Service (PKS)

A turnkey solution to provision, operate and manage enterprise grade Kubernetes clusters



Fully supported,
production-grade Kubernetes

Deep integration with NSX-T

Constant compatibility with GKE

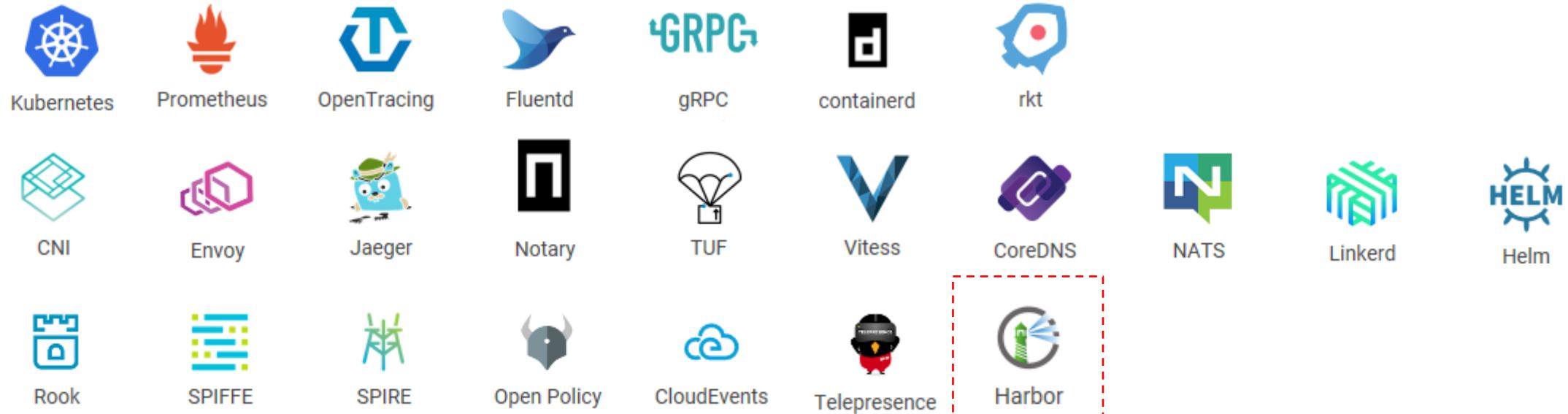
Secure with scanning, notary,
micro-segmentation

Runs on vSphere, GCP and AWS

Persistence, monitoring, operations

Project Harbor Now a CNCF Project

Container Registry for CNCF



VMware's donation to the Linux Foundation & CNCF

VMware Kubernetes Engine (VKE)

VMware Kubernetes Engine (VKE)

Highly Secure and Available Kubernetes Service

An enterprise-grade Kubernetes-as-a-Service offering in the VMware Cloud Services portfolio.

- Native SaaS
- Launching on multiple AWS regions, with support for Azure in the future
- Globally consistent policy management
- Certified Kubernetes conformant
- Full integration with AWS services



VMware Kubernetes Engine

Part of VMware Cloud Services, Offered as a SaaS-based Model

The screenshot shows the VMware Cloud Services portal interface. At the top left is the VMware logo and 'VMware Cloud Services' text. The top right shows a user profile for 'Manuel Martull CNA'. Below the header is a section titled 'CNA' (Cloud Native Applications). The service catalog displays ten items:

- Usage Meter Service (Beta)
- VMware Automation [Beta]
- VMware Cloud on AWS
- VMware Code Stream [Beta]
- VMware Cost Insight
- VMware Discovery
- VMware Hybrid Cloud Extension
- VMware Log Intelligence
- VMware NSX Cloud
- VMware Network Insight
- VMware Service Catalog [Beta]
- VMware Kubernetes Engine

The 'VMware Kubernetes Engine' card is highlighted with a thick blue border. It contains the following information:
Icon: A stylized green 'K' inside a hexagon.
VMware Kubernetes Engine
Enterprise grade Kubernetes-as-a-Service offering that provides easy to use, secure by default, and highly efficient containers.
OPEN

VMware Cloud Services
(cloud.vmware.com)

- Single Sign-on
- Single Bill to Manage
- Single Global Support

VMware Kubernetes Engine

Three Easy Steps to Run an App within Minutes

The screenshot shows the VMware Cascade interface. On the left, there's a sidebar with 'Overview', 'Folders', 'Projects', 'Smart Clusters', and 'Policies'. The main area has a section titled 'Create a Smart Cluster' with a sub-section 'Start deploying applications in minutes' and a button 'NEW SMART CLUSTER'. Below it is another section 'Organize Resources' with a sub-section 'Provide multi-tenancy' and a button 'VIEW SHARED FOLDER'.

The screenshot shows the 'New Smart Cluster' creation wizard. It asks 'Choose the way you want to use your Smart Cluster' with two options: 'Development Cluster' (selected) and 'Production Cluster'. It also asks 'The location of your Smart Cluster' with 'US West (Oregon)' selected. At the bottom, there are 'CREATE' and 'CANCEL' buttons.

The screenshot shows the Kubernetes Nodes list. It lists four nodes: ip-10-1-183-0.us-west, ip-10-1-173-20.us-west, ip-10-1-189-148.us-west, and ip-10-1-162-99.us-west. Each node has a green checkmark icon, indicating they are healthy. The table includes columns for Cluster, Namespace, IP, Status, CPU usage, and Memory usage.

Cluster	Namespace	IP	Status	CPU	Memory
kubernetes	default	ip-10-1-183-0.us-west	True	0.25 (12.50%)	0 (0.00%)
kubernetes	default	ip-10-1-173-20.us-west	True	0.25 (12.50%)	0 (0.00%)
kubernetes	default	ip-10-1-189-148.us-west	True	0.25 (12.50%)	0 (0.00%)
kubernetes	default	ip-10-1-162-99.us-west	True	0.25 (12.50%)	0 (0.00%)

The screenshot shows a custom application login screen titled 'My App'. It has fields for 'Username or Email' (containing 'user'), 'Password' (containing redacted dots), and a 'Remember Me' checkbox. At the bottom right is a 'Log In' button with a blue background and white text. Below the login form is a link 'Lost your password?'

Create new cluster

Open Kubernetes UI

Deploy and run
containerized applications

VMware Kubernetes Engine Benefits for IT Operators



Easy to Manage and Scale

- ✓ No need to hire and staff highly specialized Kubernetes team
- ✓ Simple to use policy-based management
- ✓ 24x7 health monitoring of Kubernetes clusters



Highly Available

- ✓ Highly available dial-tone service that just works
- ✓ Continuous checks on the health state of Kubernetes clusters, automatically remediating issues
- ✓ Kubernetes and AWS best practices for availability and scale



Highly Secure by Default

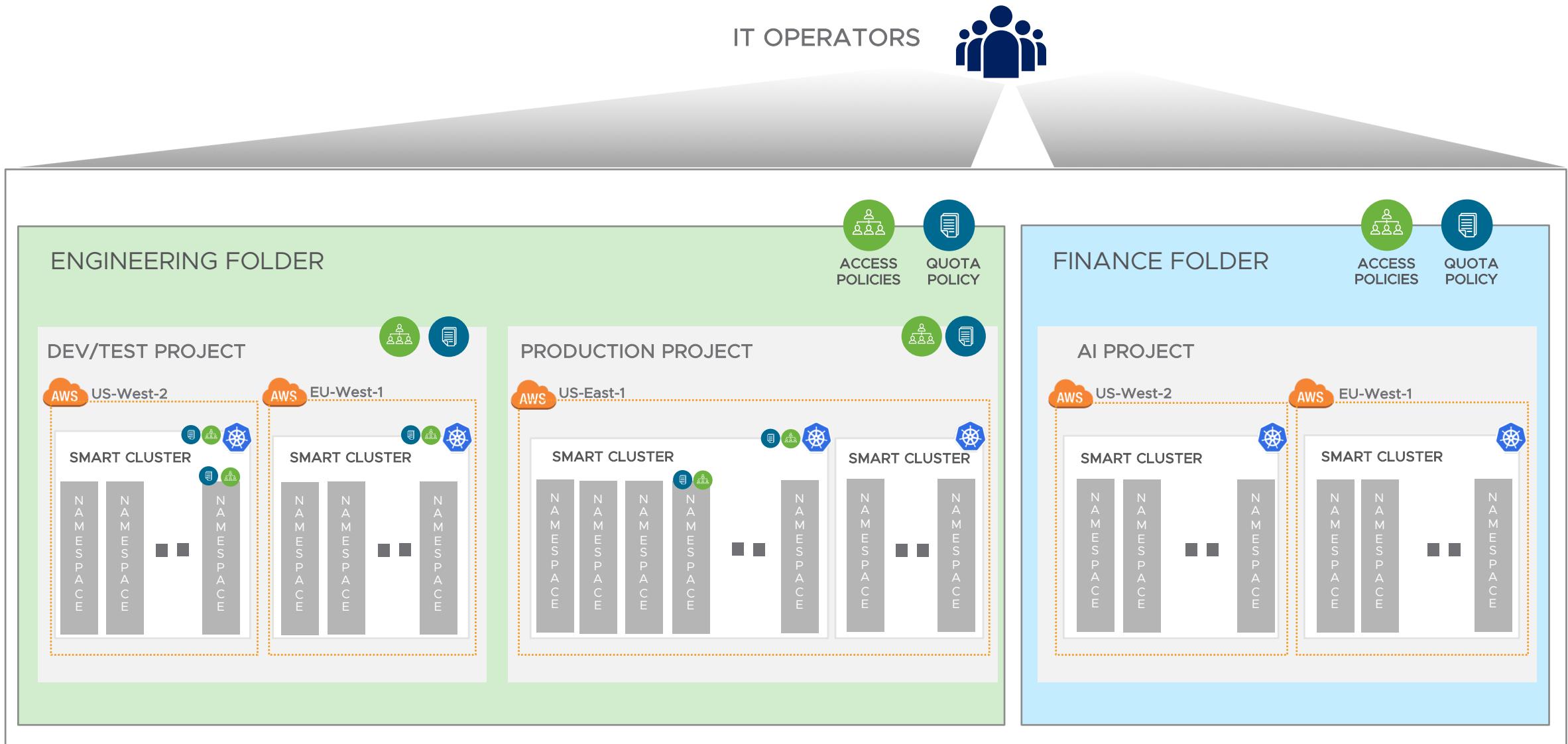
- ✓ Fully patched components
- ✓ Encryption of data at rest and in transit
- ✓ Logical network isolation



Low Cost

- ✓ Grow and shrink compute resources, based on application requirements
- ✓ Monitor opportunities for more efficient and economical cloud resources
- ✓ Fully managed

VMware Kubernetes Engine: IT Operator Control

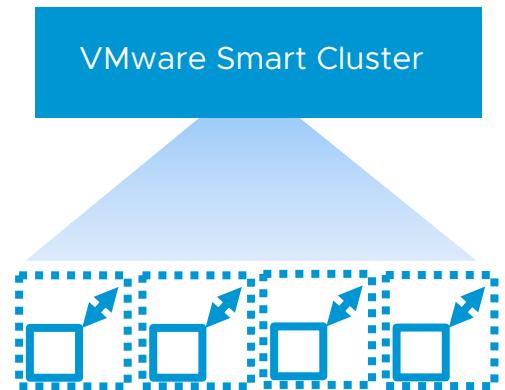


VMware Smart Cluster™

Optimizing Cluster Resources and HA

VMware Smart Cluster automates the selection of compute resources that are constantly optimized to increase density, provide high availability and reduce costs.

- Removes the need for educated guesses around cluster definition and sizing for optimal compute resources.
- Enables the management of cost-effective, scalable Kubernetes clusters that are constantly optimized to the application needs.
- Provides built-in high availability with routine health checks and self-healing capabilities for Kubernetes clusters.
- Makes it seamless for a user to run and/or manage highly available deployments without knowledge or expertise.



VMware Kubernetes Engine Benefits for Developers



Simple and Easy to Use Kubernetes

- ✓ Create a cluster in less than 90 secs, removing infrastructure complexity
- ✓ Smart Cluster continuously optimizes cluster size for optimal efficiency
- ✓ Pay-for-what-you-use



Highly Secure by Default

- ✓ Role based access control
- ✓ Encryption of data at rest and in transit
- ✓ Fully patched components



Broad Selection of Application Building Blocks

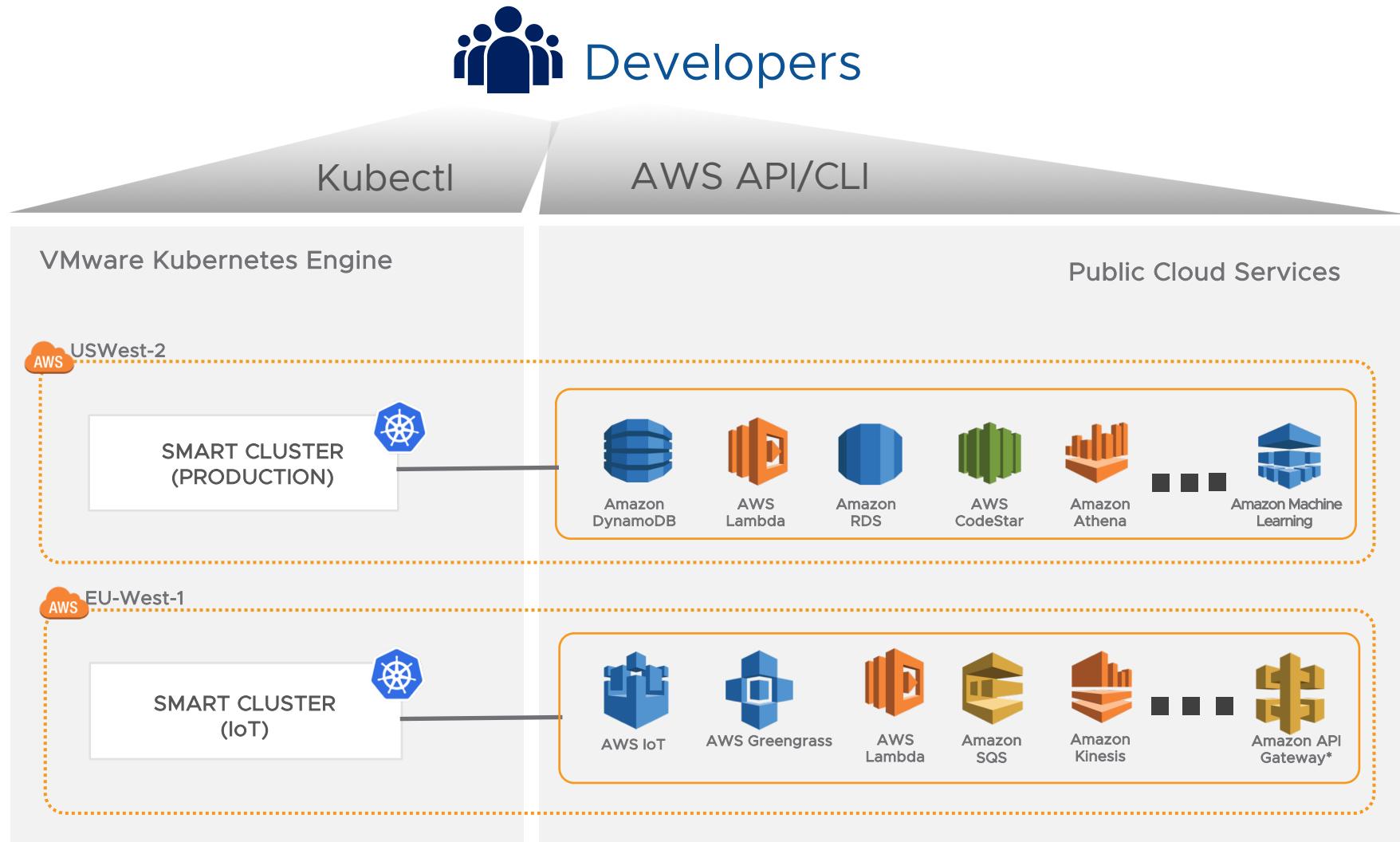
- ✓ Native Kubernetes experience enabling full ecosystem
- ✓ Integration with leading AWS Services
- ✓ Compatibility with VMware Cloud Services like Wavefront



Multi-Cloud Ready

- ✓ Single Service endpoint enabling management of Kubernetes clusters distributed globally
- ✓ Runs natively on AWS with other public clouds to follow based on customer demand
- ✓ Maintains consistent Kubernetes compatibility across different VMware offerings

VMware Kubernetes Engine: Developer Access to Services



Summary



CNCF certified
Kubernetes

Delivers the latest
Kubernetes features

Constant compatibility
with GKE

| PKS and VKE deliver
the latest innovations
from Kubernetes

Summary

Enterprise-class Kubernetes

Secure, Highly Available

Multi-Cloud

Designed for Developers + Operators



Thank You

pks-sales@vmware.com