



Technical Workshop Edition

Leveraging Rancher Federal within the U.S. Government/Public Sector

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Today's Agenda

- 1) Introductions / Overview**
- 2) What's a Container? Kubernetes?**
- 3) Why Rancher Federal**
- 4) Open-Source Ecosystem**
- 5) The Rancher Federal Approach**
- 6) Rancher Government Carbide**
- 7) Demo / Workshop (my favorite)**

About Me...

- **DoD/IC Contractor**
- **U.S. Military Veteran**
- **Built/Exited a Digital Firm**
- **Open-Source Contributor**
- **Career of Software/DevOps**
- **Active Volunteer FF/EMT**

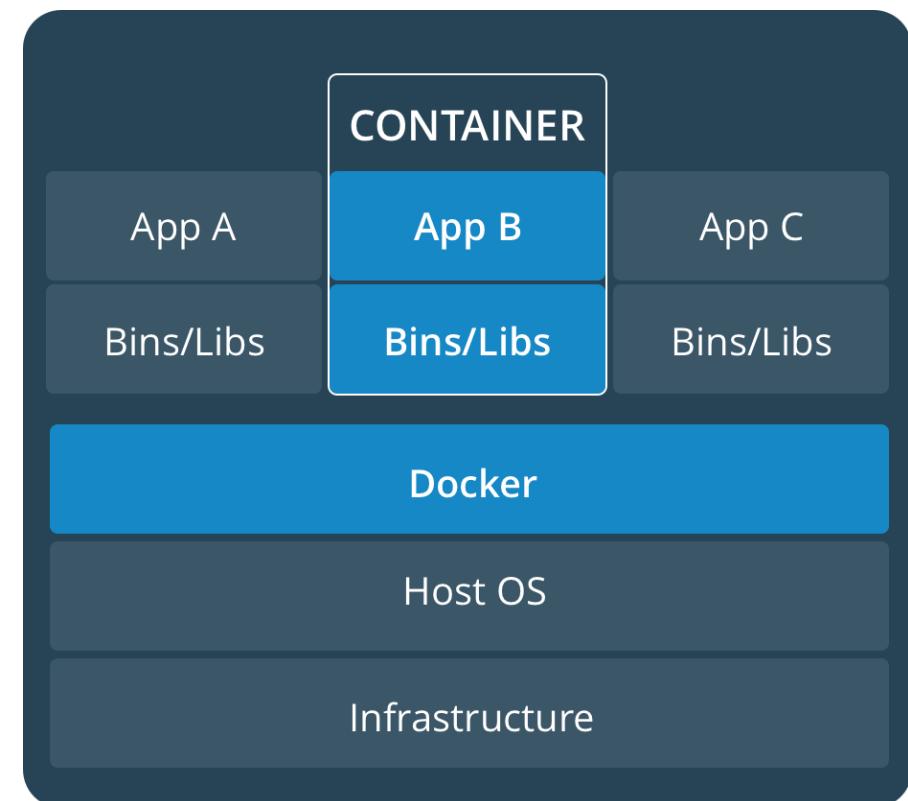
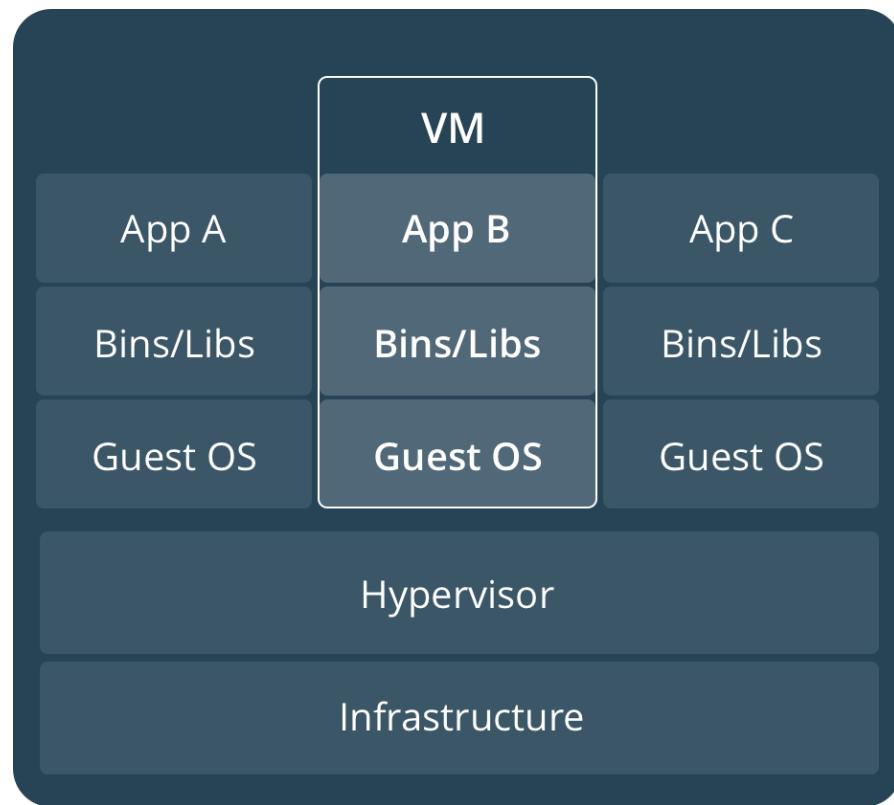
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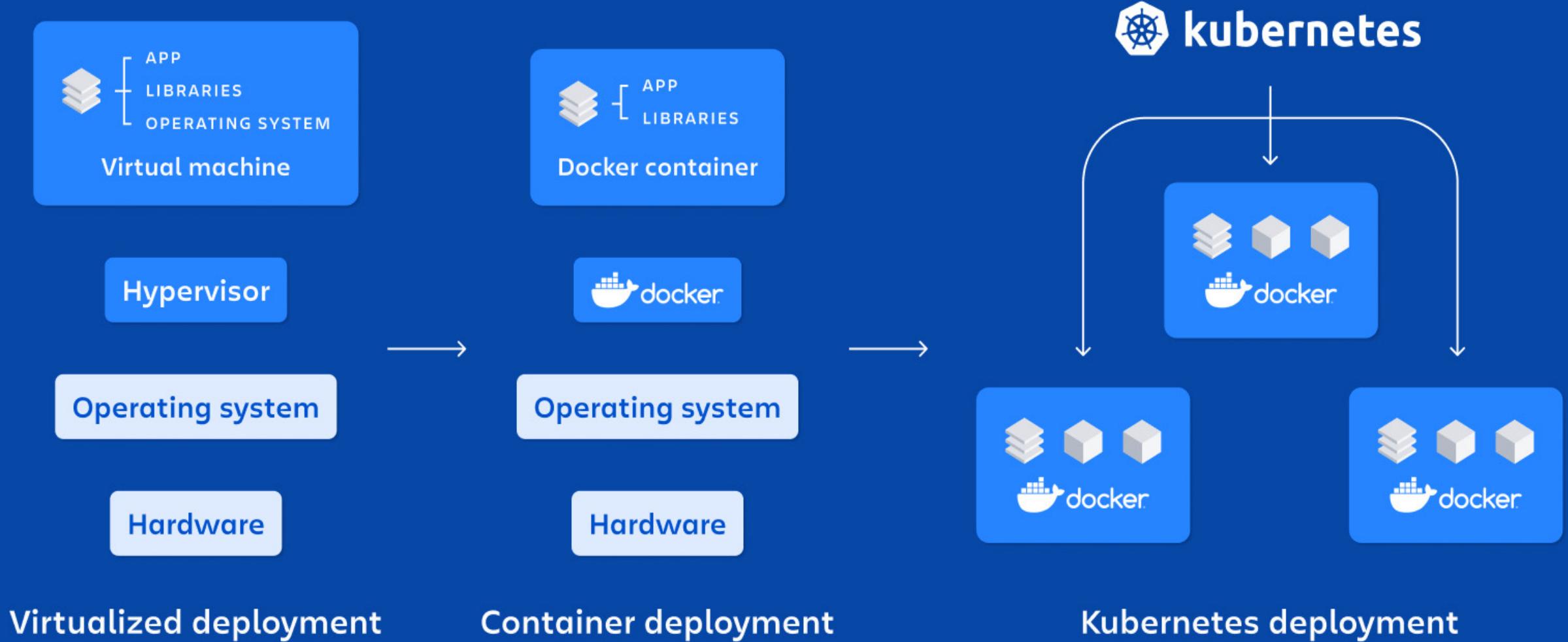
<https://linkedin.com/in/zackbradys>



Virtual Machines vs Containers



VMs → Containers → Kubernetes!



Rancher Government Solutions

Engineering Cloud Native Computing Platforms for the US Government

Rancher Federal (RGS) is a 100% US-based entity dedicated to delivering Kubernetes and Cloud Native Technology solutions and support across the DoD, IC, and Federal community.

Rancher Federal (RGS) offers varying levels of service including US-State Side Support and cleared on-site support.

Rancher Federal (RGS) exists to enhance Rancher's capabilities to meet the ever-evolving Federal mission requirements.

STIG/CIS Hardening & Validation

SELinux and FIPS-2/3 Compliance

Air-Gapped , C2S, SC2S, GovCloud Support

PKI Authentication

Enterprise Audit Functionality



Rancher's Three Pillars of Success

Accelerating Mission and Driving Success

Enterprise Support

- 24/7/365 U.S./CONUS based Enterprise Support for Rancher and the Kubernetes Ecosystem.
- Technical Account Manager and Bootstrap Architecture Support
- Cleared Onsite Engineers and Support Teams
- 70% of RGS hold a TS//SCI or higher clearance
- Continuous Training & Education



Professional Services

- On-Site, On-Premises, or Remote Cleared Engineers
- Cloud-native Advocates and Evangelists focused on bootstrapping or delivering customer success
- Multiple Prime Contracts at USAF PlatformOne and many Subcontracts across the DoD/IC Communities
- Ranges from Hands On Support to Quarterly Meetings

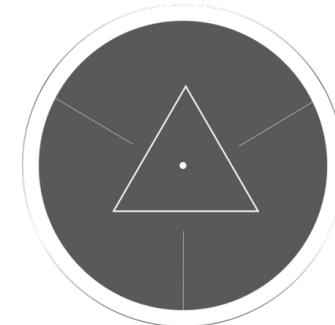
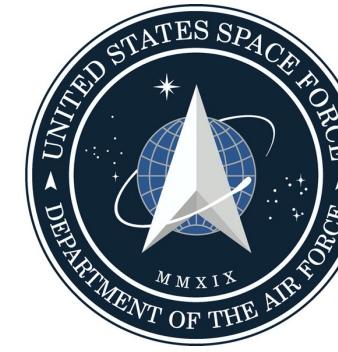


Mission - Accelerator

- Dedicated to weaponizing the Rancher products to work better in airgap/offline/classified mission environments
- Bringing a security-first mindset to the Rancher capabilities by baking in NIST FIPS-140-2/3 encryption & DISA STIG certification/validation
- Collaborated to develop the RKE Government/RKE2 secure-by-default Kubernetes distribution



Worried about STIGs? Concerns with ATOs?



Products and Projects

COMMERCIALLY SUPPORTED
PRODUCTS



RANCHER

Flagship product – Rancher Multi-cluster Manager is world's most popular Kubernetes Management platform



LONGHORN

Highly available persistent block storage for microservices-based, stateful applications



RKE 2

A CNCF-certified Kubernetes distribution that built to the security requirements of the DoD/IC



K3S

A CNCF-certified, Lightweight Kubernetes distribution. Easy to install, half the memory, all in a binary less than 100MB



FLEET

GitOps & Continuous Delivery at scale. Deploy & manage thousands to millions of clusters at the network edge

OPEN SOURCE
PROJECTS



SUBMARINER

Built to connect overlay networks of different Kubernetes clusters



RANCHER DESKTOP



KUBEWARDEN



HYPPER

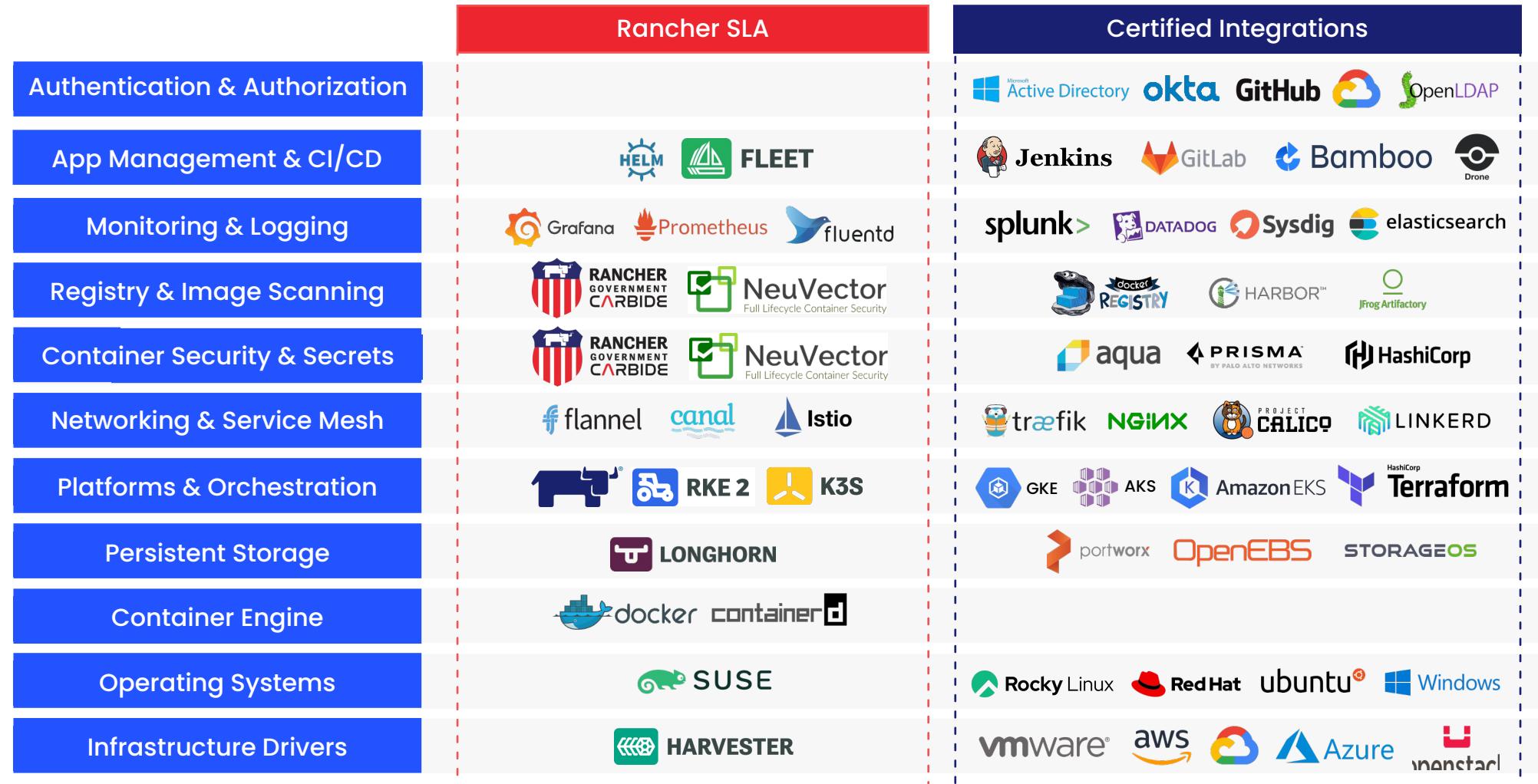


EPINIO



OPNI

The Complete Rancher Stack



Rancher Federal + Amazon AWS

Rancher is the leading Kubernetes distribution and Kubernetes platform.

Amazon AWS is the leading and most adopted cloud provider.

But what does that mean for our customers?

Rancher Federal and Amazon AWS have partnered together to develop a public marketplace offering to dramatically reduce the barrier to entry to Kubernetes in the cloud.

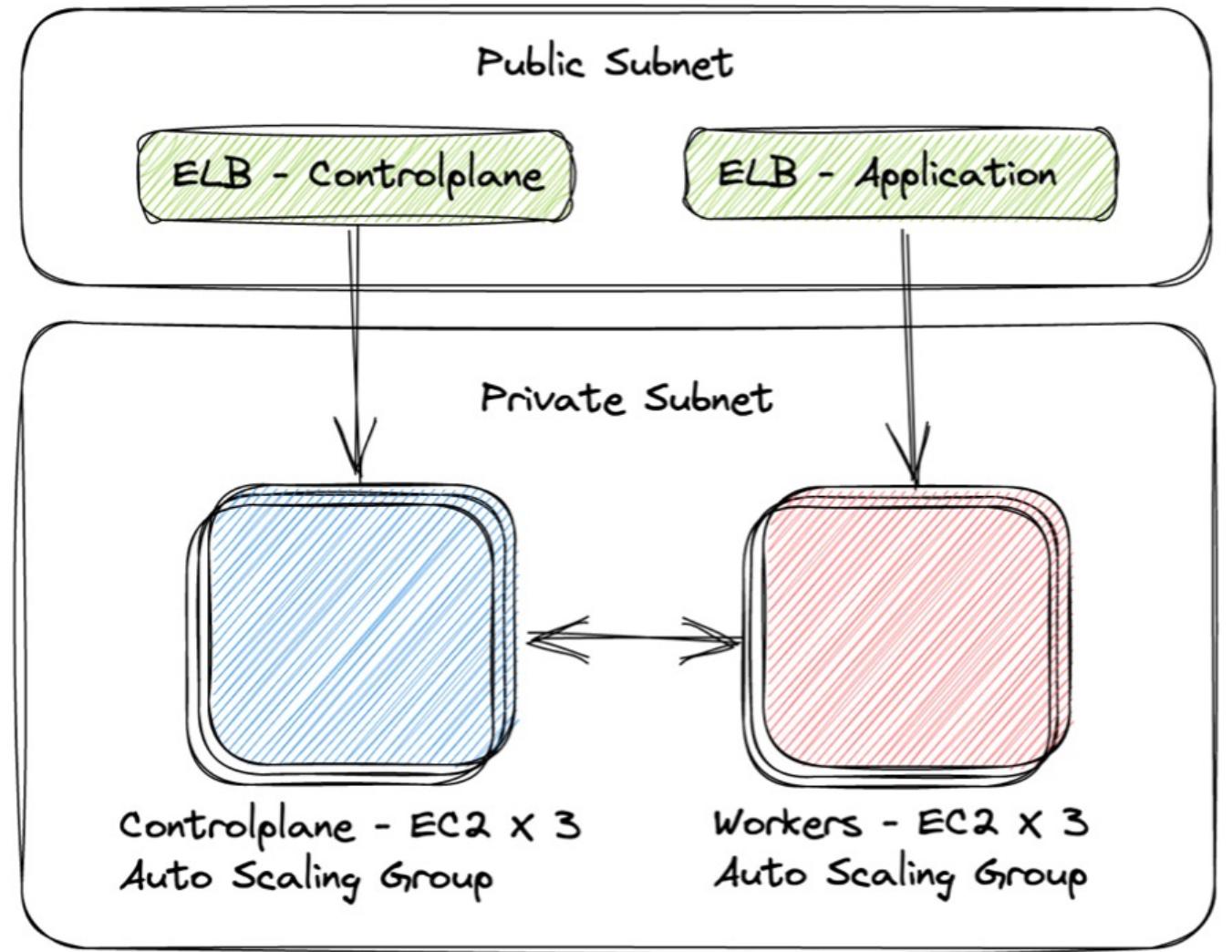
This offering is a free trial of a highly available deployment of RKE2/Rancher Manager on AWS GovCloud (U.S.), designed strictly for use only by U.S. Federal Government Customers.

<http://tryranchergov.com/>

<https://github.com/zackbradys/rancher-on-aws>

Architectural Overview

Rancher Manager and RKE2 - AWS



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Rancher Government Carbide...

Available to all current and future supported customers!

- Secure and Trusted Container Registry (Azure Gov)
- Government STIG Validation (STIGATRON)
- Supply Chain Management Offline Rancher Docs
- SLSA3/SBOMs/Scans
- Built for our U.S. Government Support Customers (Licensed)
- **RGS Answer to E.O. 14028**

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CARBIDE

Welcome to Rancher

Clusters 2

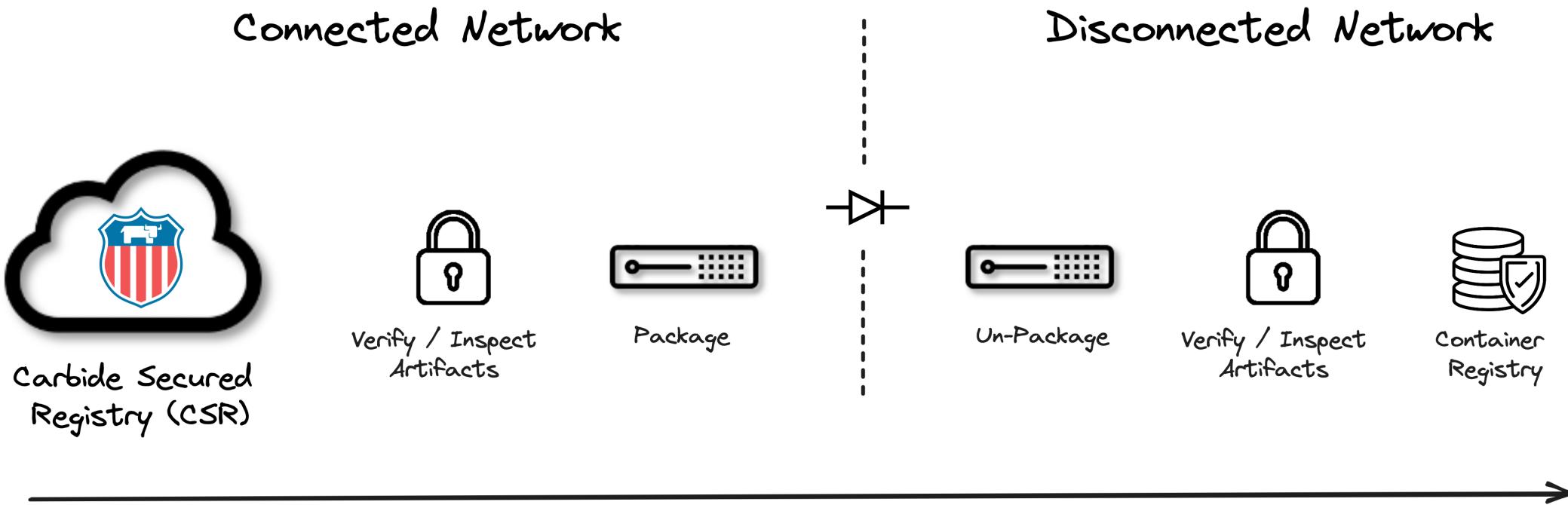
State	Name	Provider	Kubernetes Version	CPU	Memory	Pods
Active	local	Local RKE2	v1.24.12+rke2r1	24 cores	90 GiB	173/1200
Active	7310-hargrove-rke2	Imported RKE2	v1.24.12+rke2r1	30 cores	56 GiB	161/1200

Links

- Docs
- Forums
- Slack
- File an Issue
- Get Started
- Commercial Support

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Carbide Supply Chain Customer Workflow



STIGATRON

Validate downstream clusters compliance from the centralized Rancher Manager

Monitor

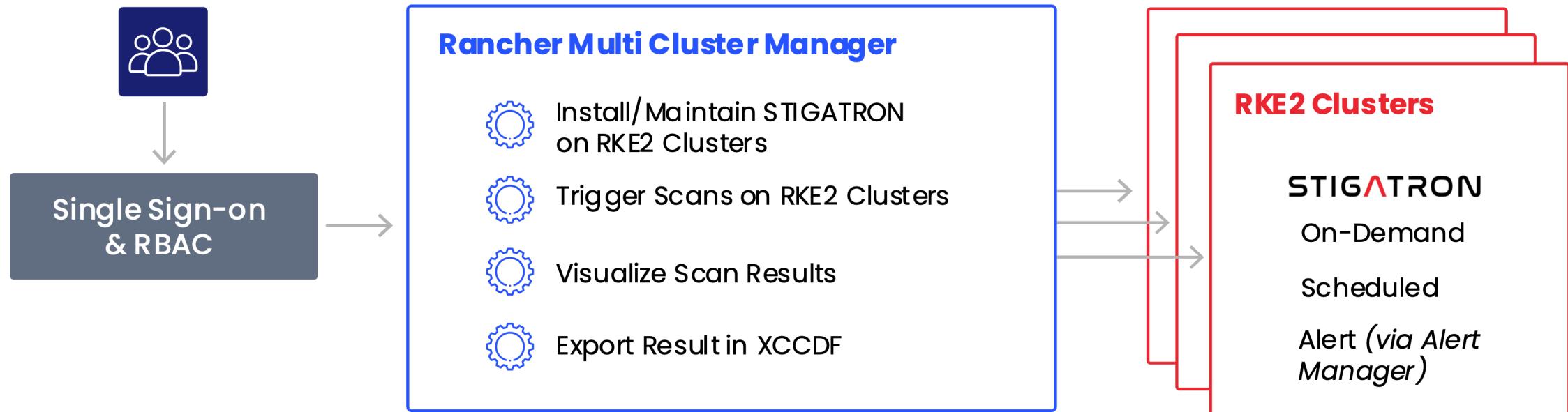
and validate the DISA STIG integrity of downstream RKE2 Kubernetes clusters

Empower

system administrators to refocus their time on more meaningful initiatives

Streamline

cyber auditing and compliance processes



Rancher Offline Docs

- Cluster
- Workload
- Apps
- Service Discovery
- Storage
- Monitoring
- Istio
- Longhorn
- NeuVector
- More Resources
- Airgap-friendly Docs

Airgap-friendly Docs

 Carbide Docs Carbide by Rancher Government	Carbide
 Fleet continuous delivery	cicd
 Harvester hyper-converged infrastructure	hci
 Hauler Docs swiss-army tool	air-gap
 k3s Docs Lightweight k8s	Distro
 Kubewarden Docs Kubewarden is a policy engine for Kubernetes.	Security
 Longhorn Docs Cloud-native block storage	Storage
 Neuvector Docs container security engine	security
 Rancher Manager Rancher Multi-cluster Manager	Multi-cloud
 Rancher Desktop developer container runtime	dev env
 RKE2 Docs Secure-by-default Kubernetes	Distro

 RGS

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From Datacenters to the Edge...



Questions?
and then our...



Technical Workshop!

<http://workshop.rancherfederal.io/>





**Thank you for your
time today!**

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Rancher is always Meeting You At Your Mission



Platform Services

RANCHER - Multi-Cluster & Multi-Cloud Kubernetes Management

Authentication: Active Directory, SAML, okta, GitHub, LDAP

App Catalog, Observability, Storage & Networking: App Catalog (Helm), Monitoring & Alerts (Flame), Persistent Storage (Rancher Bull), Service Mesh (Istio)

Policy Enforcement & Governance: Centralized Audit & CIS Benchmarking, AIOps, Monitoring & Logging, RBAC, Pod & Network Policies, OPA & KubeWarden

Simplified Cluster Operations & Infrastructure Management: Cluster Provisioning & Lifecycle Management, K8s Versioning & GitOps CD, Cluster Templates & Config Enforcement, Rancher Hosted, Virtual Machine & OS Management

Infrastructure Services

RKE 1 & 2 | Any CNCF K8s

Servers Containers VM

On-prem

Amazon EKS Azure AKS Google GKE

IaaS CaaS

Cloud

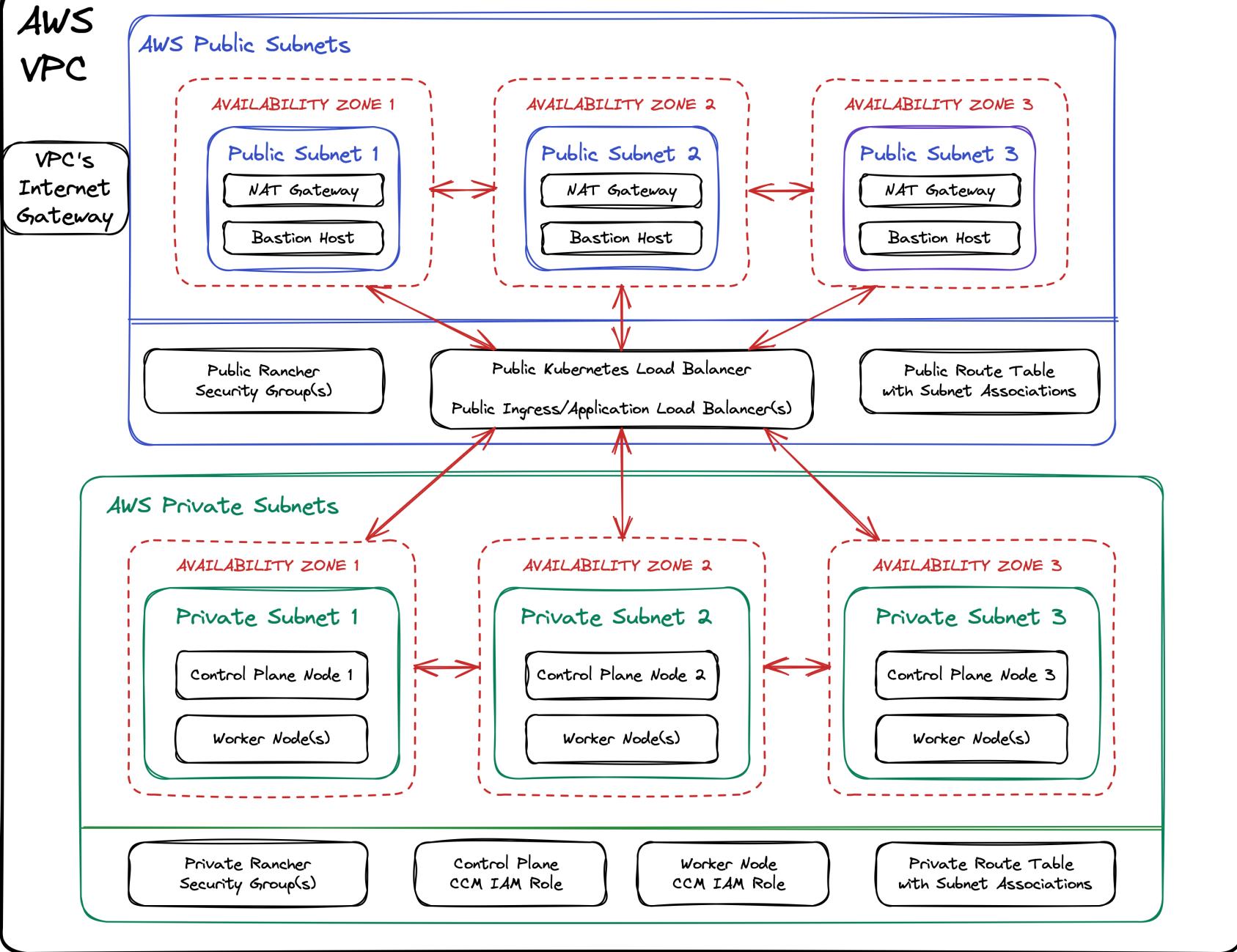
K3S

SLE Micro HARVESTER

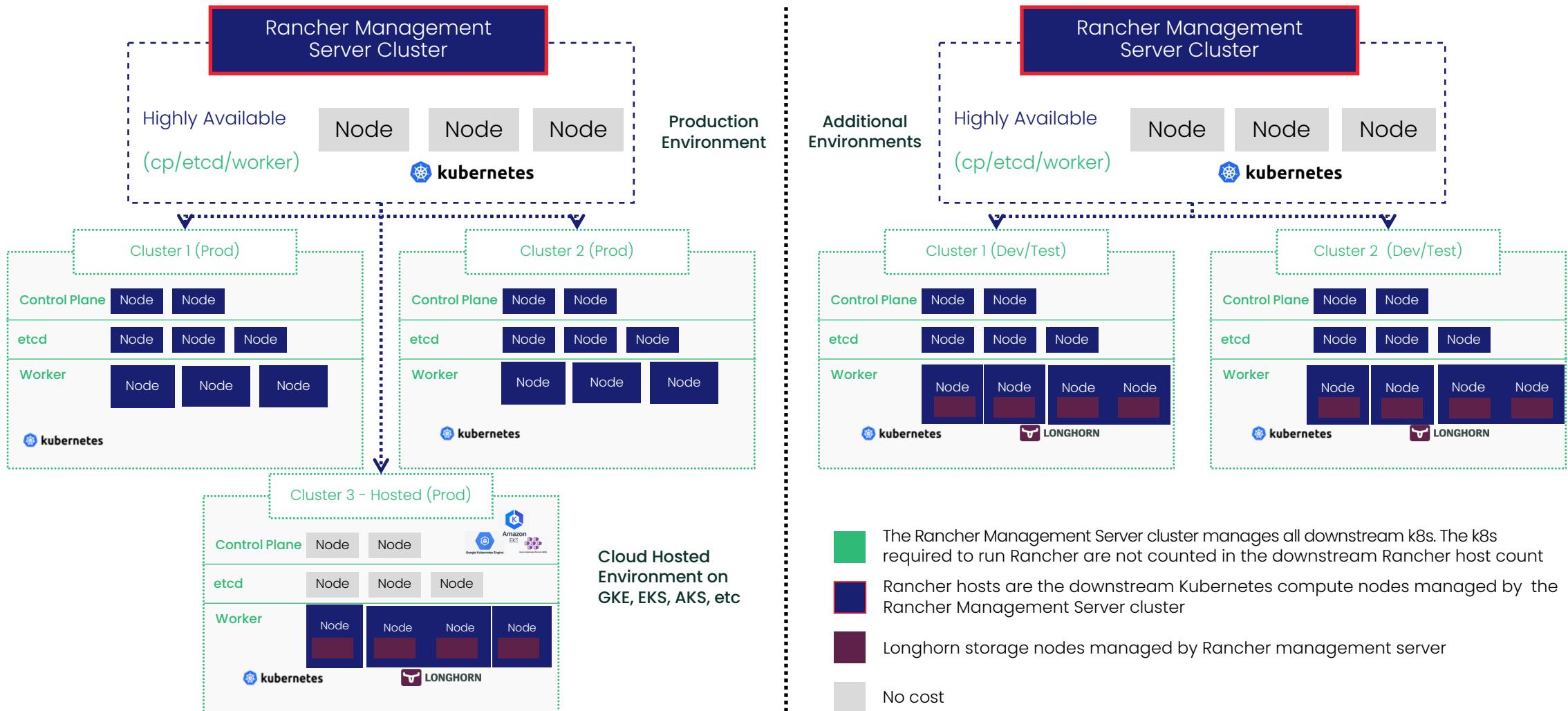
Servers Device VM

Edge

AWS VPC



Recommended Architecture





Carbide Supply Chain Security

Enabled by the Rancher Government Carbide Secured Registry (CSR)

