



Helping the U.S. Government Run
Kubernetes Everywhere.



Nat Sec Group

Agenda

1. Who we are - Cool kids...
2. What are Containers - Quick Primer.
3. Why Kubernetes - Why you need a scheduler?
4. Why Rancher - Who is Rancher?
5. Rancher Stack - Show me the burrito!
6. Workshop

Who am i?

- Former DOD Contractor
- Docker - PS, SE, TAM - Federal
- Stackrox/RedHat - Federal SE
- Rancher user for 6+ years
- Volunteer Firefighter/EMT

@clemenko

Andy.Clemenko@RancherFederal.com

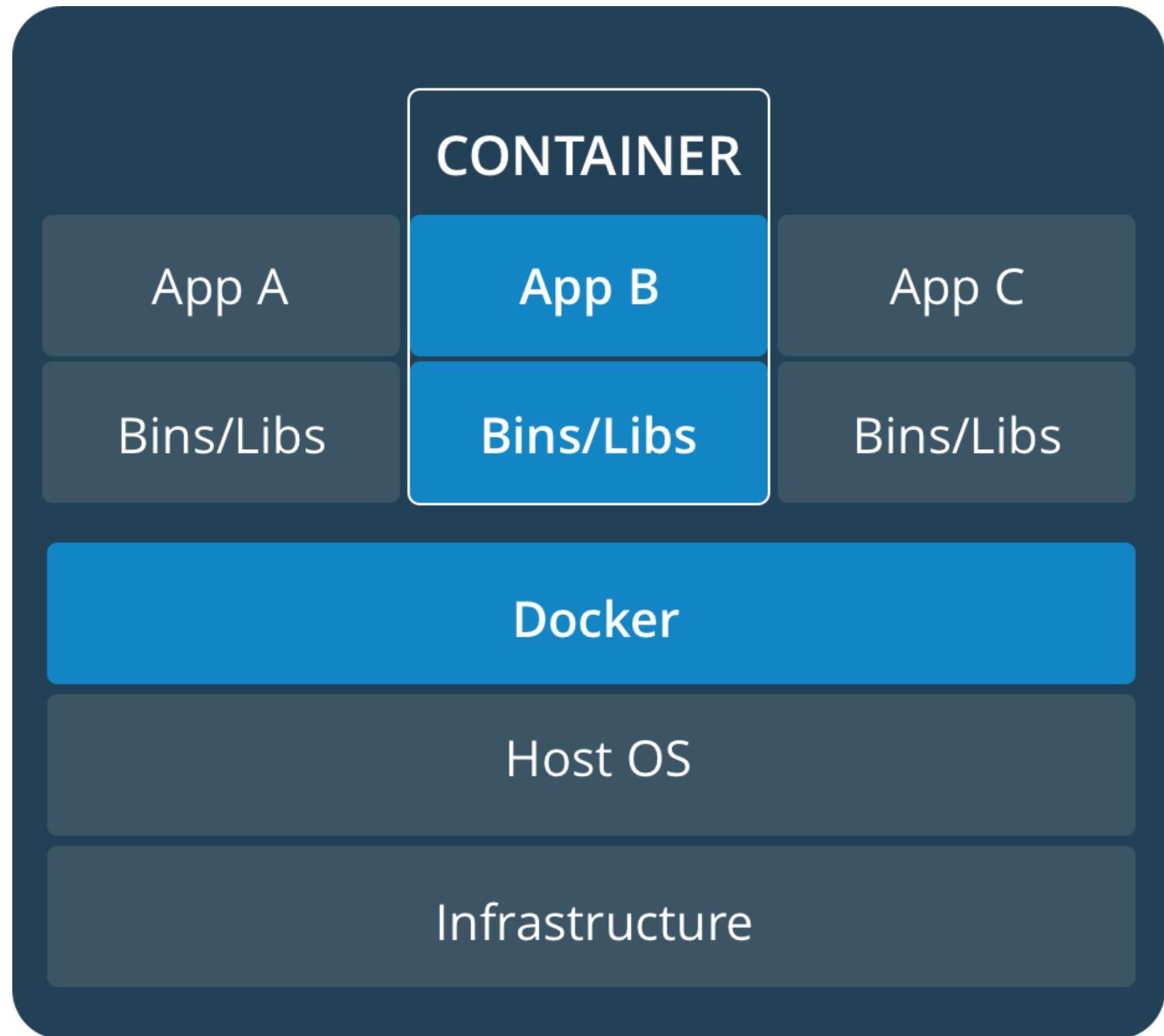


Containers?

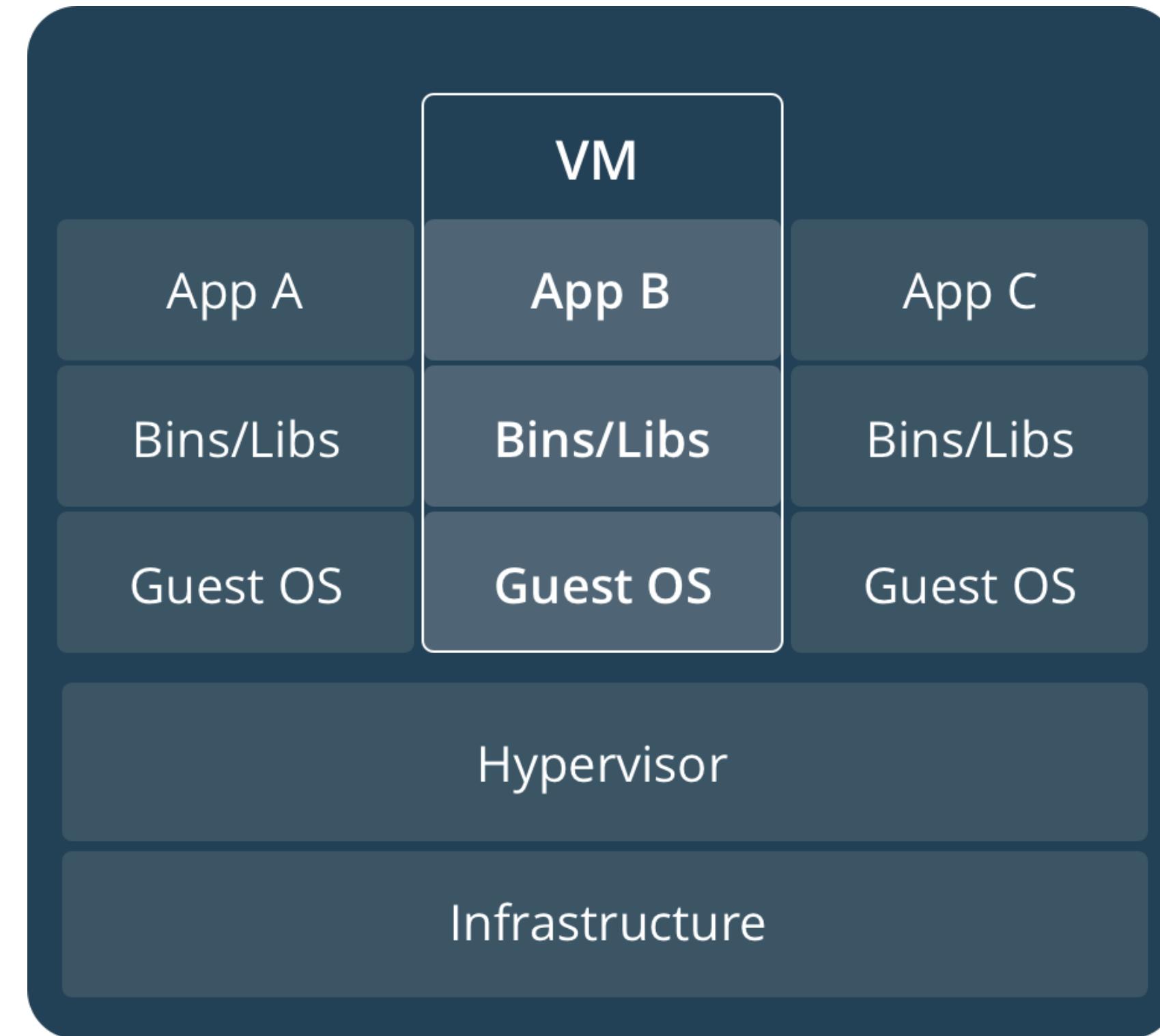








Containers are an app level construct

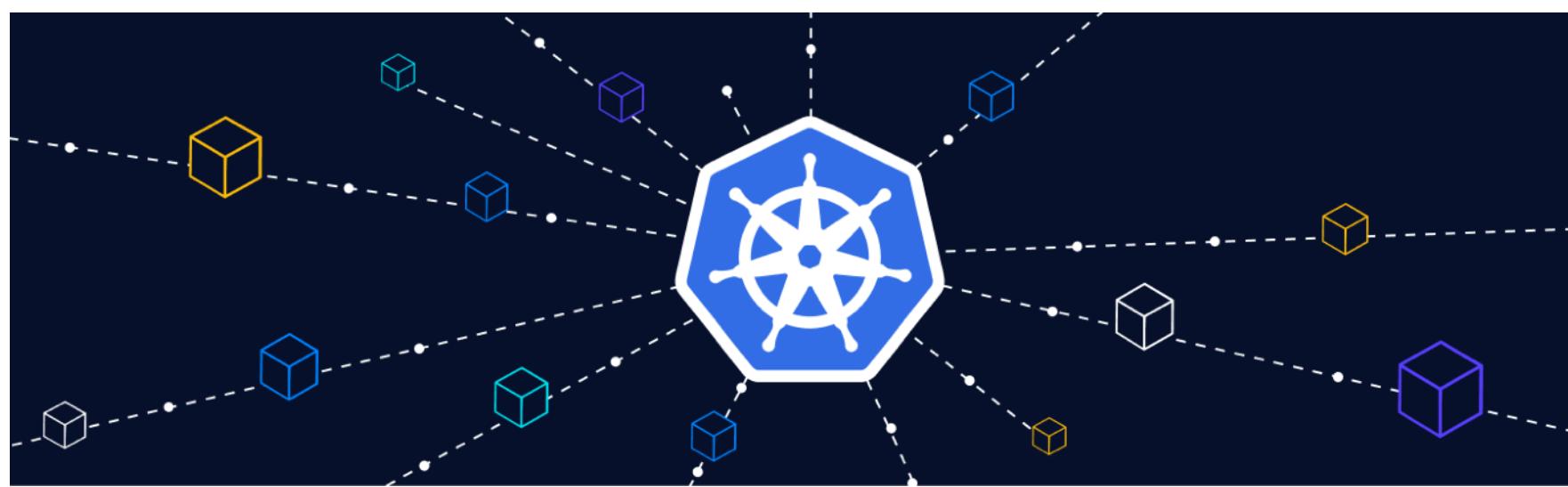


VMs are an infrastructure level construct to turn one machine into many servers

Why Kubernetes



No Really, Why K8s?



1. Service discovery and load balancing
2. Storage orchestration
3. Automation
4. Self-healing
5. Secret Management

from : <https://kubernetes.io/docs/concepts/overview/what-is-kubernetes/>

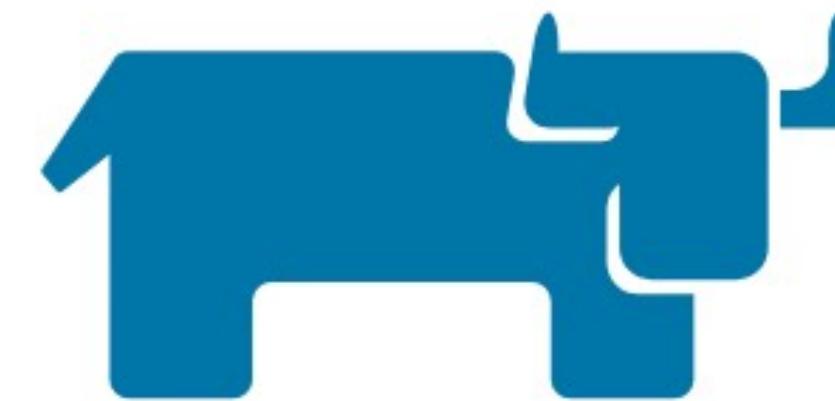
Why Rancher



Rancher Government's 3 Pillars of Success

Enterprise Support

- 24/7 CONUS-based enterprise support for Rancher & ecosystem
- Technical Account Manager & bootstrap architecture support
- Cleared Onsite support (70% TS/SCI)
- Airgap as a first-class citizen
- Training



Professional Services

- On-site (or remote) full-time engineers
- Cloud-native advocates & evangelists focused on bootstrapping or delivering customer success
- Multiple prime contracts at USAF PlatformOne



Mission-Accelerator

- Dedicated to weaponizing the Rancher product portfolio to work better in air-gap/classified/mission environments
- Bring a security-first mindset to the Rancher capabilities by baking in NIST FIPS-140-2/3 encryption & DISA STIG certification
- Collaborated to develop the RKEGovernment/RKE2 secure-by-default Kubernetes distribution

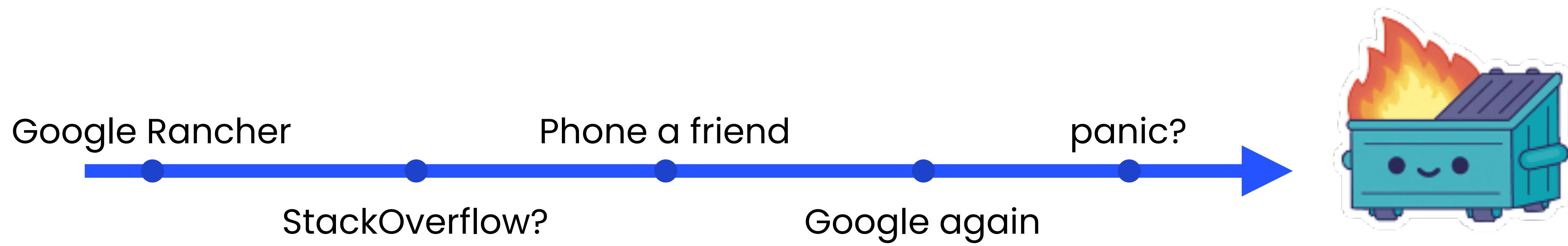


Rancher Government (SUSE RGS)

- Rancher Government 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 Government offers varying levels of service including US-State Side Support and cleared on-site support
- Rancher Government exists to enhance Rancher's capabilities to meet the ever evolving Federal mission requirements
 - PKI Authentication
 - SELinux/FIPS Compliance
 - STIG/CIS Hardening
 - Enterprise Audit Functionality
 - Air-Gapped, C2S, SC2S, GovCloud Support
 - Automated Upstream Image Vulnerability Scanning



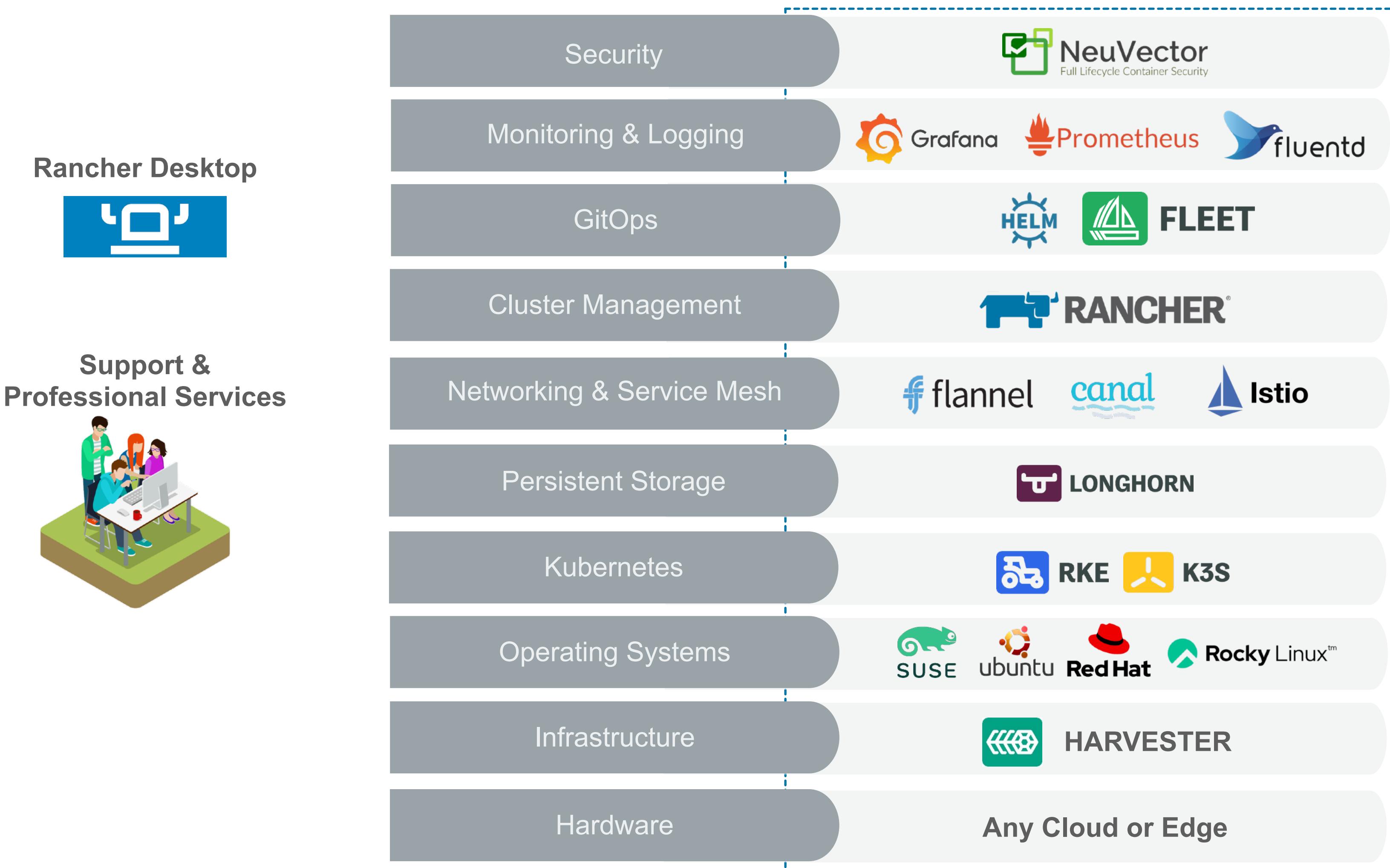
The Unsupported Rancher Experience



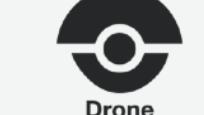
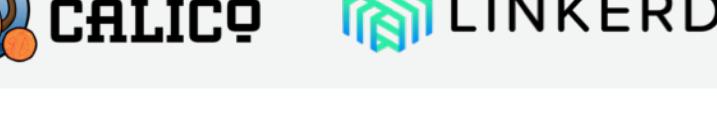
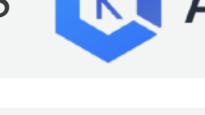
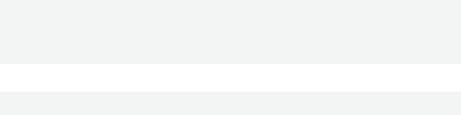
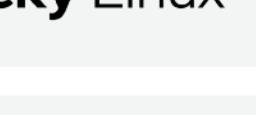
Rancher Stack



Empowering where your mission goes



SLAs

	Rancher SLA	Certified Integrations
Authentication & Authorization		Microsoft Active Directory   
App Management & CI/CD	 	 Jenkins   
Monitoring & Logging	 Grafana  Prometheus 	   
Registry & Image Scanning		  
Container Security		  
Networking & Service Mesh	 flannel  canal  Istio	 traefik  NGINX  PROJECT CALICO 
Platforms & Orchestration	 RANCHER  K3S  RKE	 GKE  AKS  Amazon EKS  Terraform
Persistent Storage		 portworx  OpenEBS  STORAGEOS
Container Engine	 docker  containerd	
Operating Systems		 Windows  Rocky Linux™  ubuntu  Red Hat
Infrastructure Drivers		 vmware  aws  Azure  openstack



Rancher Government Carbide Features:



Software supply
chain security

STIG@TRON

Automated STIG
compliance



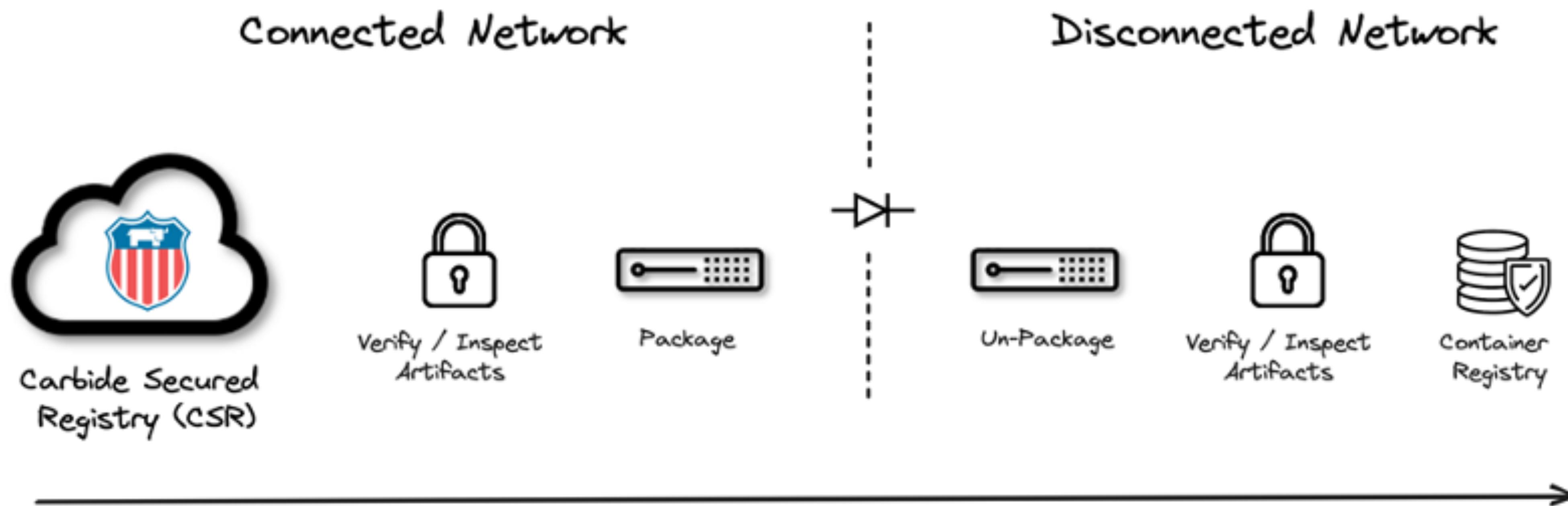
Airgap
documentation

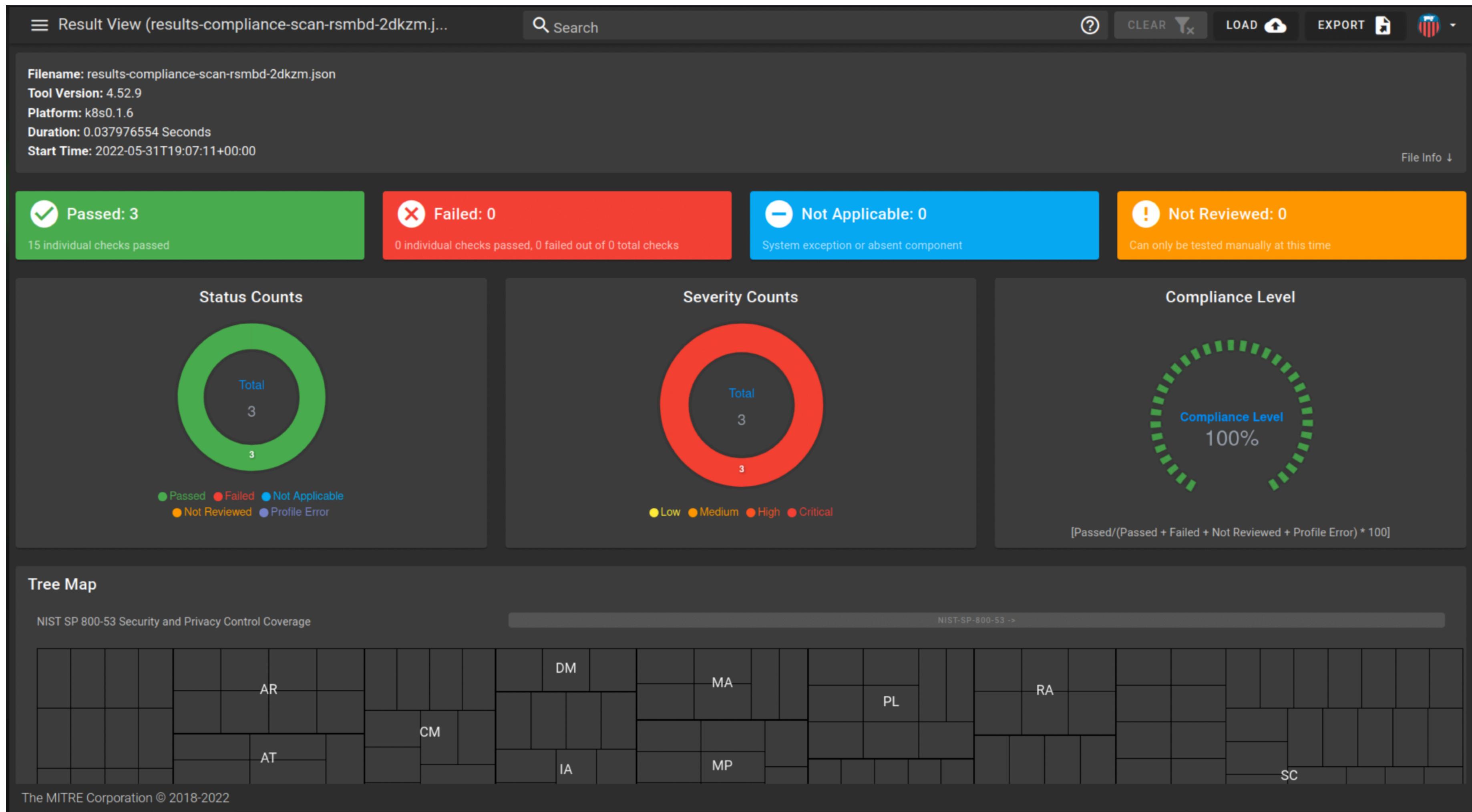


Secure Supply Chain: Image Attestation Reports

```
[12:12:36] ~ $ cosign tree rgcrprod.azurecr.us/test/image:1.0
📦 Supply Chain Security Related artifacts for an image: rgcrprod.azurecr.us/test/image:1.0
└── 📜 SBOMs for an image tag: rgcrprod.azurecr.us/test/image:sha256-da07d0372714f0dc3d166ac757e7839a6345ac6c2a89e7521734553e657d7175.sbom
    └── 🍒 sha256:7eafdd238dd049c53ce1c5c089b0cb3e039d4bc8ea9534da883545593ed1951d4
└── 📜 Attestations for an image tag: rgcrprod.azurecr.us/test/image:sha256-da07d0372714f0dc3d166ac757e7839a6345ac6c2a89e7521734553e657d7175.att
    ├── 🍒 sha256:d0c2be2f3cfa9dedcadddc65ce10fbf551c9a24f79ba9ebdb5f33d7ddb26eba
    ├── 🍒 sha256:df4f89921e3a098d880c2bf75ca04c9614b59d0a00127a5485a4999fad0a6450
    ├── 🍒 sha256:b142bcff8e788c76dfe0b88ee882f57d8755317e05bf7a690a5b4689fec94996
    ├── 🍒 sha256:13ae3700d3e00d8f7bae4cd82fac3b07ebubb9e4cd9a52af15c08ba08d46bb76
    └── 🍒 sha256:0b0dbdb2663df7d89720aef595c20be172711e51629551d02d9064bea4f00c2
└── 🗝 Signatures for an image tag: rgcrprod.azurecr.us/test/image:sha256-da07d0372714f0dc3d166ac757e7839a6345ac6c2a89e7521734553e657d7175.sig
    ├── 🍒 sha256:bc3040767b05c3d89ba999bb6f63dc5a9855ac27c3293aef84624abf6998ad71
    └── 🍒 sha256:bc3040767b05c3d89ba999bb6f63dc5a9855ac27c3293aef84624abf6998ad71
```

Carbide Supply Chain Customer Workflow





Embedded Airgap Docs



Cluster >
Workloads >
Apps >
Service Discovery >
Storage >
Policy >
CIS Benchmark >
Longhorn >
STIGATRON >
More Resources >
Airgap-friendly Docs

Airgap-friendly Docs



Carbide Docs
Carbide by Rancher Government



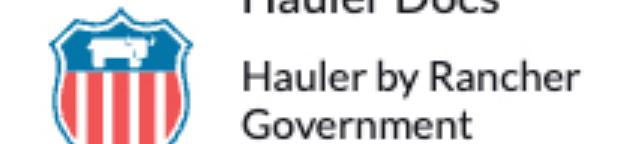
Elemental
Immutable OS Toolkit



Fleet
Continuous Delivery



Harvester
Hyper-Converged Infrastructure



Hauler Docs
Hauler by Rancher Government



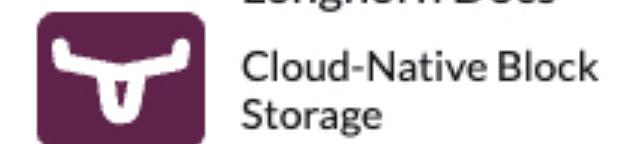
k3s Docs
Lightweight Kubernetes



Kubernetes
CNCF



Kubewarden Docs
Kubewarden is a policy engine for Kubernetes.



Longhorn Docs
Cloud-Native Block Storage



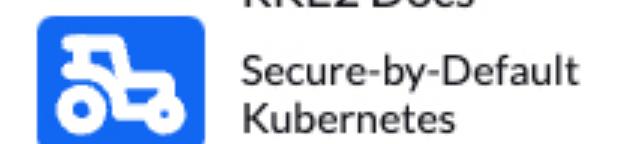
Neuvector Docs
Container Security Engine



Rancher Desktop Docs
Rancher Desktop



Rancher Manager
Rancher Multi-cluster Manager



RKE2 Docs
Secure-by-Default Kubernetes

Already ATO'd



 **KESSEL RUN**

Workshop time...

rfed.io/workshop



CAGE code: 8GLZ3
DUNS: 117387835

Thank you

For more information, contact us at:

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