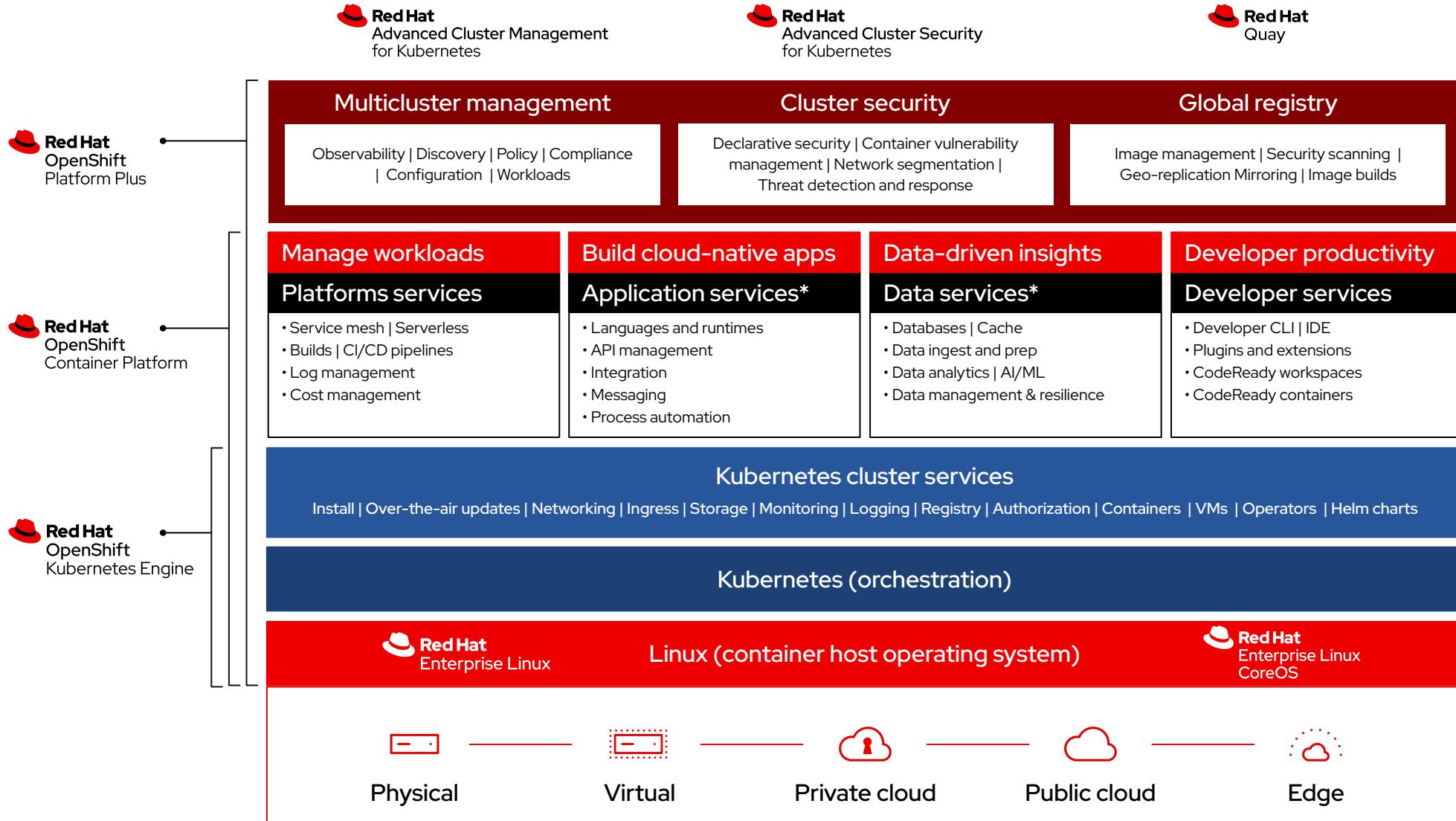




OpenHybridCloud OpenShift *plus*

Alfred Bach
PSA EMEA



Open Hybrid Cloud

Red Hat Cloud

Red Hat Marketplace

Open Ecosystem

Red Hat Cloud Experience

Applications



Red Hat
Advanced Cluster Management
for Kubernetes



Red Hat
OpenShift

- Cluster Management
- Policy Management
- Governance
- Cost Management
- Telemetry
- Platform Lifecycle
- Application Lifecycle



Red Hat
Enterprise Linux



Red Hat
Virtualization



Red Hat
OpenStack Platform



vmware®



aws



Google Cloud



IBM Cloud



Microsoft Azure



Alibaba Cloud



Edge Computing

The Hybrid and Multi-Cloud Landscape



Open Source	YES	NO	NO	NO	NO
Hybrid Cloud	YES with disconnected	YES no disconnected	YES	YES no disconnected	YES no disconnected
Multi Cloud	YES with disconnected	NO no disconnected	NO	YES no disconnected	NO no disconnected
Multi-Cloud Management	YES	NO	NO	YES	Limited
Containers and VMs	YES	YES	YES	NO	YES
Integrated AppDev	YES	DIY	YES	NO	YES
Application Services	YES	YES	YES	Limited	Limited
Customer Managed	YES	NO	YES	NO	YES
Managed Service	YES	YES	YES	YES	NO

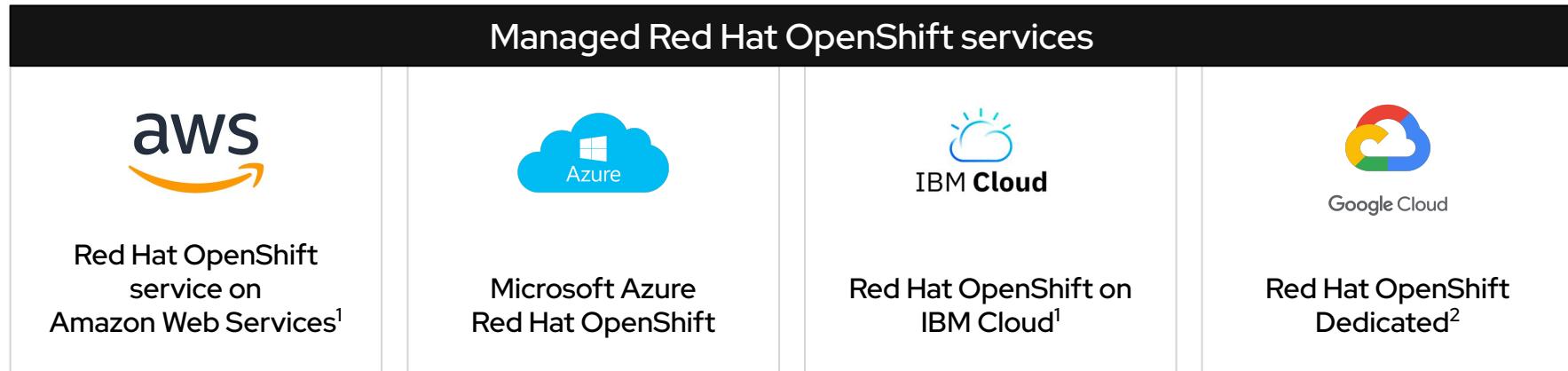
Red Hat OpenShift

CONFIDENTIAL designator

Available as self-managed platform or fully managed cloud service

Start quickly, we
manage it for you

Cloud managed



You manage it, for
control and flexibility

Customer managed



Open Hybrid Cloud Demo

CONFIDENTIAL designator



@burrsutter - bit.ly/12wayscloud



Advanced Cluster Management for Kubernetes

Alfred Bach
PSA EMEA

Robust. Proven. Award winning.



Multicloud lifecycle management



Policy driven governance, risk, and compliance



Advanced application lifecycle management

Overview

Google (1 clusters) | Amazon (2 clusters)

01 OpenShift | 02 OpenShift

All clouds: 8 Apps, 7 Clusters, 736 Pods

Cluster compliance: 3 (66% Compliant, 2 Non-compliant)

guestbook app: Resource topology, How to read topology

Policy violations: 1/3 CLUSTER VIOLATIONS, 3/8 POLICY VIOLATIONS

NIST SP 800-53: No violations found

Find policies: policy-certificatetemplate, policy-auth-provider, policy-certificatetemplate, policy-consolelink, policy-impolicy, policy-imagemanifests, policy-namespace, policy-namespace-1, policy-role, policy-rolebinding

Policies: PR DS 2 Data In Transit, PR IP 1 Baseline Configuration, PR DS 2 Data Security, PR IP Information Protection Processes And Procedures, PR DS Data Security, PR IP Information Protection Processes And Procedures, PR IP 1 Baseline Configuration, PR AC 4 Access Control, PR DS 2 Data In Transit, PR IP 1 Baseline Configuration, PR DS 2 Data Security, PR IP Information Protection Processes And Procedures, PR IP 1 Baseline Configuration, PR DS 2 Data Security, PR IP Information Protection Processes And Procedures, PR AC Identity Management Authentication And Access Control, PR AC 4 Access Control, PR AC Identity Management Authentication And Access Control, PR AC Identity Management Authentication And Access Control

Clusters: 3 Clusters (Service frontend, Service redis-master, Service redis-slave, Deployment frontend, Deployment redis-master, Deployment redis-slave, Replicaset frontend, Replicaset redis-master, Replicaset redis-slave)

Unified Multi-Cluster Management

CONFIDENTIAL designator

Single Pane for all your Kubernetes Clusters

The screenshot shows the Red Hat Advanced Cluster Management for Kubernetes interface. At the top, there's a navigation bar with the Red Hat logo and the title "Advanced Cluster Management for Kubernetes". Below it is an "Overview" section with summary statistics: 4 Apps, 5 Clusters, 3 Kubernetes types, 1 Regions, 17 Nodes, and 646 Pods. A "Clusters" section displays a table of clusters with columns for Name, Namespace, Labels, Endpoint, Status, Nodes, Klusterlet Version, Kubernetes Version, Storage, Memory, and CPU. The table includes entries for exec2-iks, social-dev-1, social-dev-2, social-dev-gke, social-prod-1, and social-prod-eks. On the left side, there are three panels: "Cluster compliance" (showing 100% Compliant), "VCPU" (showing 94% used), and "Used" (showing 38/40%). The bottom right corner features the Red Hat logo.

- **Centrally** create, update and delete Kubernetes clusters **across multiple** private and public clouds
- Search, find and modify **any** kubernetes resource across the **entire** domain.
- **Quickly** troubleshoot and resolve issues across your **federated** domain

Policy based Governance, Risk and Compliance

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Don't wait for your security team to tap you on the shoulder

The screenshot displays a dashboard for policy-based governance, risk, and compliance. At the top, there are four summary cards: 'POLICY VIOLATIONS' (3), 'CLUSTER VIOLATIONS' (1), 'HIGH SEVERITY FINDINGS' (1), and 'MEDIUM SEVERITY FINDINGS' (1). Below these are sections for 'Top violations' and 'Top security findings'. A central callout box highlights a 'compliancePolicy' entry with a 'Detail' section showing configuration details and a large redacted code block. The bottom half of the screen shows an 'Object Templates' table with three entries: 'restricted-mcm', 'deny-from-other-namespaces', and 'mem-limit-range'. The 'mem-limit-range' row is expanded to show its YAML configuration.

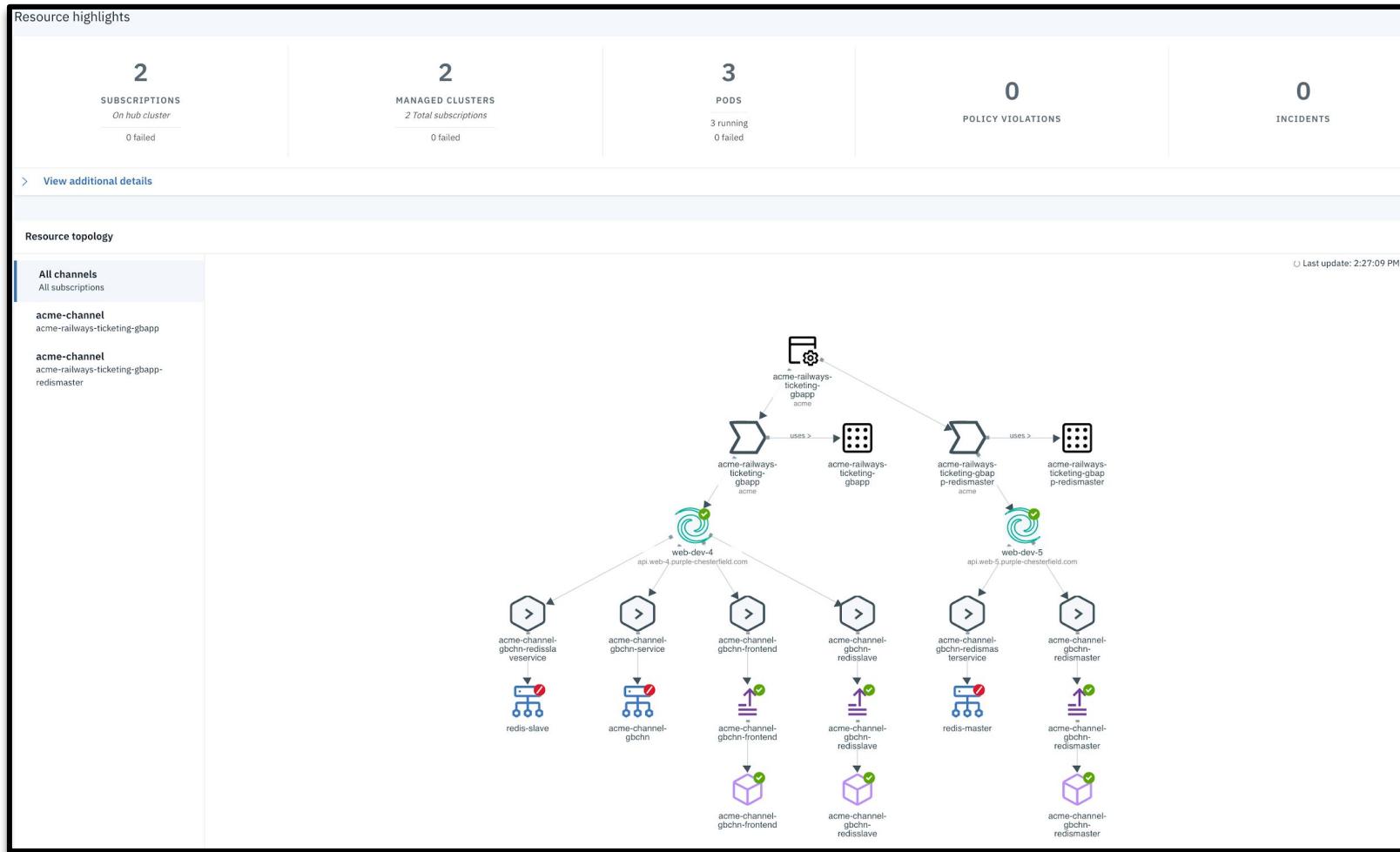
Name	Compliance Type	API version	Kind	Last Transition	Compliant
restricted-mcm	musthave	policy/v1beta1	PodSecurityPolicy	-	-
deny-from-other-namespaces	musthave	networking.k8s.io/v1	NetworkPolicy	-	-
mem-limit-range	musthave	v1	LimitRange	-	-

- **Centrally** set & enforce policies for security, applications, & infrastructure
- Quickly **visualize** detailed **auditing** on configuration of apps and clusters
- Built-in **CIS** compliance policies and audit checks
- **Immediate** visibility into your compliance posture based on **your** defined standards

Advanced Application Lifecycle Management

Simplify your Application Lifecycle

CONFIDENTIAL designator



- **Easily Deploy Applications at Scale**
- Deploy Applications from **Multiple Sources**
- Quickly **visualize** application relationships **across** clusters and those that **span** clusters

Benefits

Red Hat OpenShift and Red Hat Advanced Cluster Management for Kubernetes



Accelerate development to production

Self-service provisioning allows app dev teams to request clusters directly from a catalog removing central IT as a bottleneck.



Increase application availability

Placement rules can allow quick deployment of clusters across distributed locations for availability, capacity, and security reasons.



Reduce costs

Centralized management of clusters reduces operational cost, makes the environment consistent, and removes the need to manually manage individual clusters.



Ease compliance

Policies can be written by the security team and enforced at each cluster, allowing environments to conform to your policy.



StackRox | Red Hat ACS

Alfred Bach

Principal Solution Architect - Cloud, Security & DC- Infrastructure

Partner Enablement Team EMEA

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Kubernetes is the standard
for application innovation...



- ▶ Microservices architecture
- ▶ Declarative definition
- ▶ Immutable infrastructure

...and Kubernetes-native
security is increasingly critical



- ▶ Secure supply chain
- ▶ Secure infrastructure
- ▶ Secure workloads

DevOps

DevSecOps

Security

Benefits of a Kubernetes-native approach to security



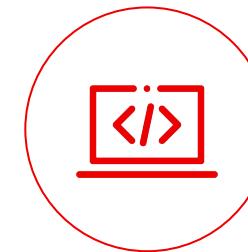
Lower operational cost

DevOps and Security teams can use a common language and source of truth



Reduce operational risk

Ensure alignment between security and infrastructure to reduce application downtime



Increase developer productivity

Leverage Kubernetes to seamlessly provide guardrails supporting developer velocity

Red Hat Advanced Cluster Security for Kubernetes

A cloud workload protection platform and cloud security posture management to enable you to “shift left”

Shift left

Secure supply chain

Extend scanning and compliance into development (DevSecOps)

Cloud security posture management (CSPM)

Secure infrastructure

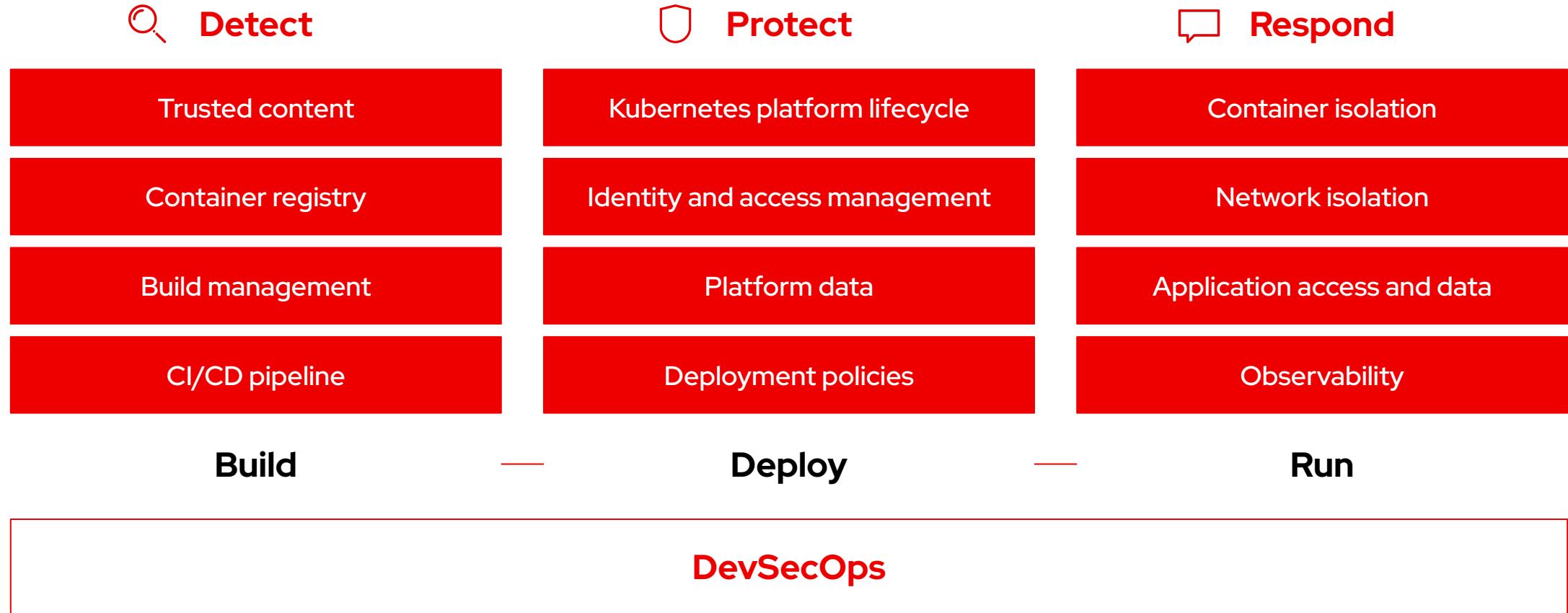
Leverage built-in Kubernetes CSPM to identify and remediate risky configurations

Cloud workload protection (CWPP)

Secure workloads

Maintain and enforce a “zero-trust execution” approach to workload protection

Red Hat OpenShift provides a secure foundation



RHACS delivers security depth to entire application lifecycle

Detect

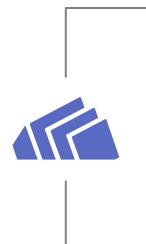
Trusted content
Container registry
Build management
CI/CD pipeline

Protect

Kubernetes platform lifecycle
Identity and access management
Platform data
Deployment policies

Respond

Container isolation
Network isolation
Application access and data
Observability



Vulnerability analysis
App config analysis
APIs for CI/CD integrations

Image assurance and policy admission controller
Compliance assessments
Risk profiling

Runtime behavioral analysis
Auto-suggest network policies
Threat detection / incident response

Build

Deploy

Run

DevSecOps

RHACS

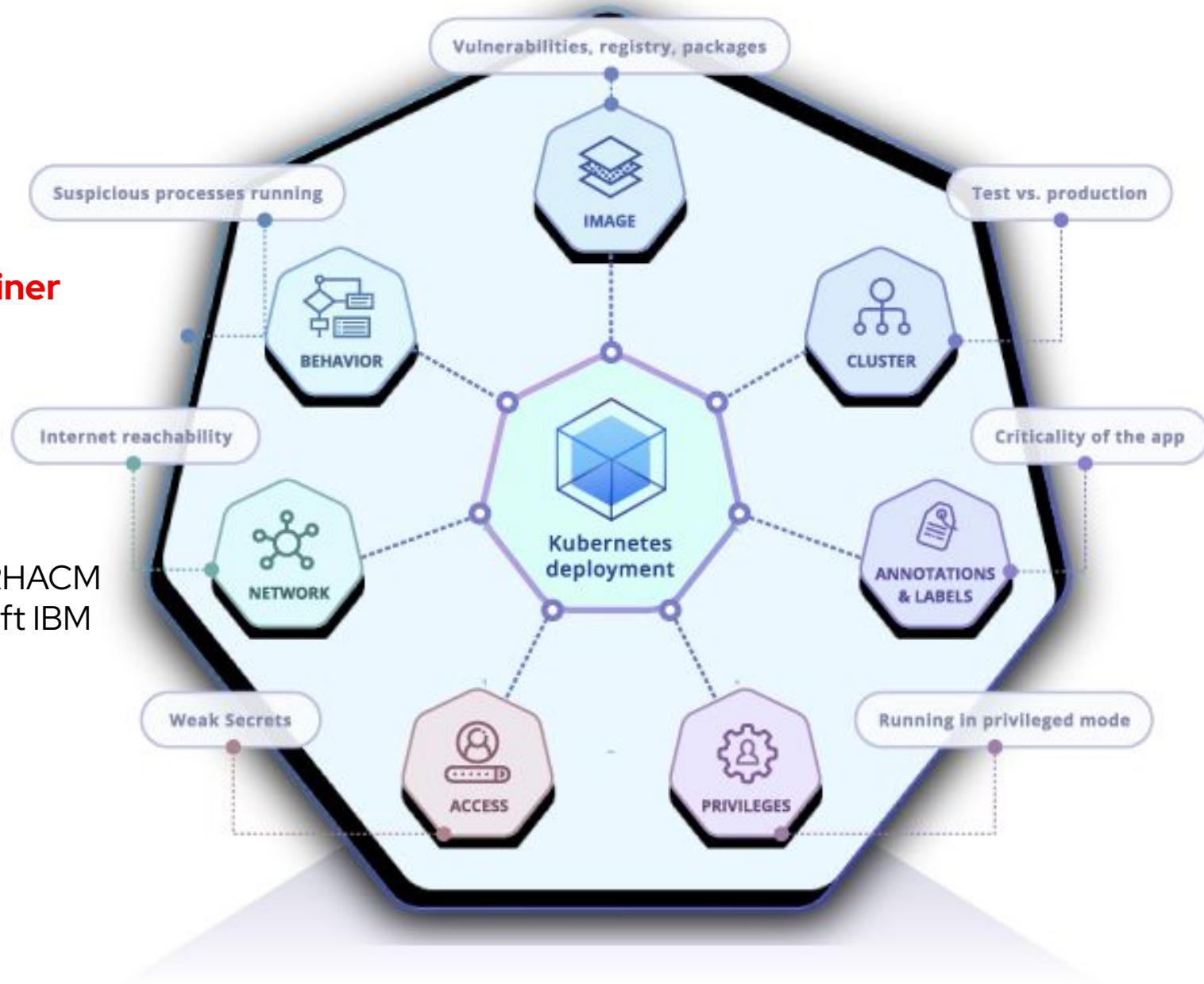
Securing Kubernetes Deployments

It's all about the Application in the container

- plus a Registry Scanner.

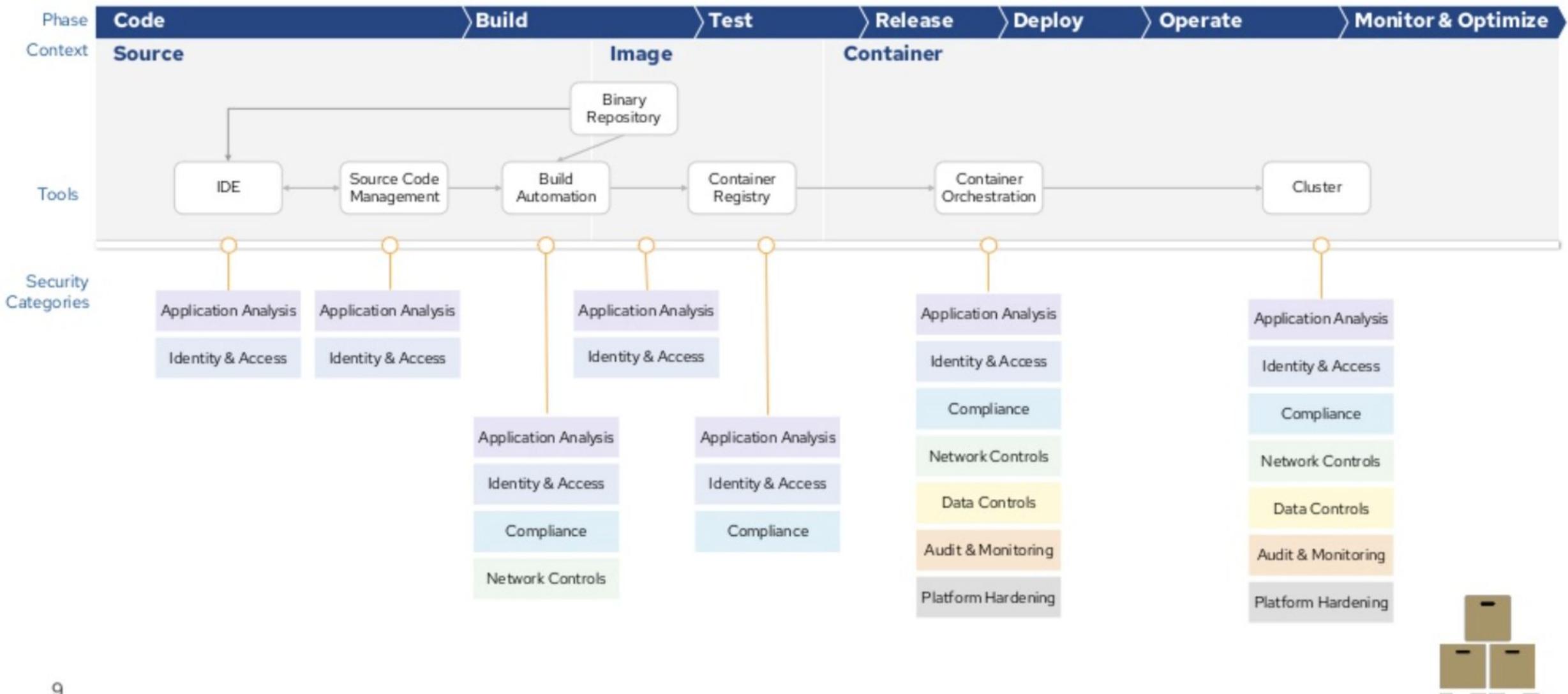
It's not:

- End 2 End Monitoring -> Dynatrace
- Infrastructure Monitoring - RHACM
- Infrastructure Compliance Monitoring - RHACM
- Access Control / Audit to and in OpenShift IBM QRadar or CyberARC
- SIEM Solution -> Splunk
- Certificate Management - Cert Manager
- API Management - 3scale
- Application Performance Management
- Registry - QUAY
- Service MESH

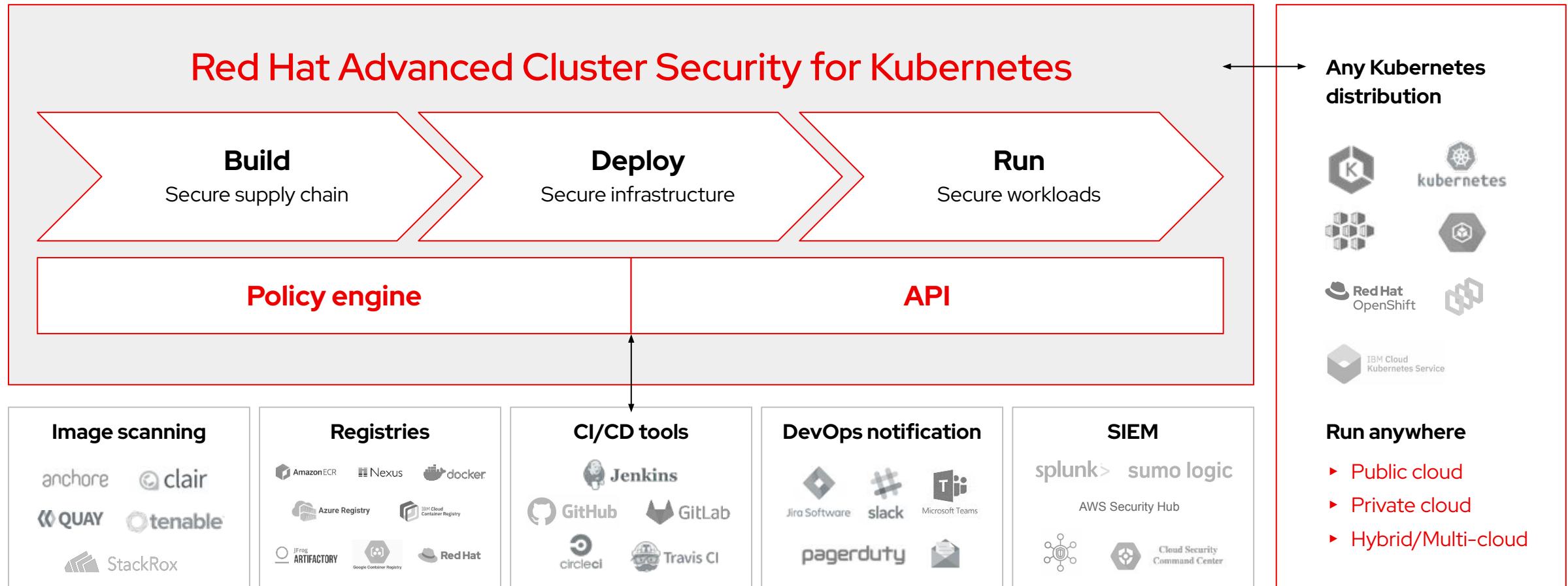


RHACS

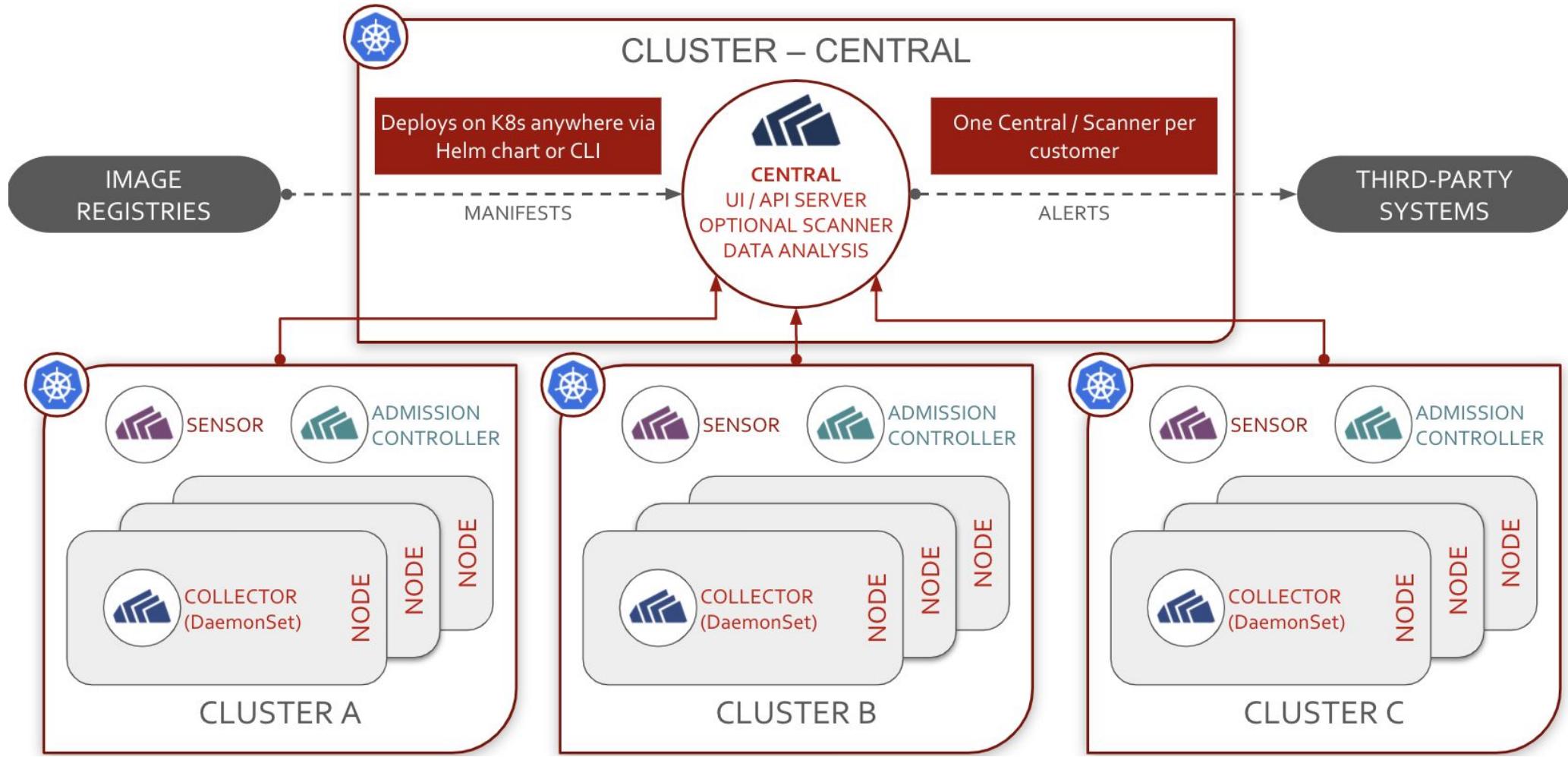
adding security to dev ops for your kubernetes native applications



The first Kubernetes-native security platform



Architecture



Who are the buyers?

Budget may come from CISO, DevOps, Platform team



Cloud Native companies

- DevOps teams
- Shift left / DevSecOps
- Influencers: Security Architects



Fortune 500, Global 2,000

- CISO
- IT Ops
- Influencers: Security Architects, DevOps

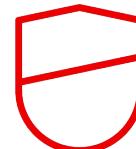
Relevant use-cases for StackRox you can have a conversation on day 1

Try to focus on these use-cases and give timely & valuable feedback to help shaping our roadmap



Detect

Find and remediate security issues as your applications are built enabling faster delivery. Apply intelligence from runtime analysis to adjust subsequent builds.



Protect

Protect your infrastructure by securing the Kubernetes platform configuration and automating security-related application deployment policies.



Respond

Monitor for and respond to anomalous application behavior. Leverage deep data collection and correlation to identify threats and enable forensic analysis.



Thank you

Red Hat is the world's leading provider of enterprise open source software solutions. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500.

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