

2022 OpenShift Commons Gathering



Red Hat Advanced Cluster Security Update

Co-located with KubeCon CloudNativeCon



Tuesday, October 25



**Westin Book Cadillac
Detroit, Michigan**



Doron Caspin
Red Hat



Michael Foster
Red Hat

Sponsored by  **Red Hat**
OpenShift

Agenda

- ▶ Security & Kubernetes
- ▶ Red Hat Advanced Cluster Security
- ▶ Introducing the new RHACS Cloud Service
- ▶ How to get started
- ▶ What's Next for RHACS

Security & Kubernetes

Containers and Kubernetes need DevSecOps



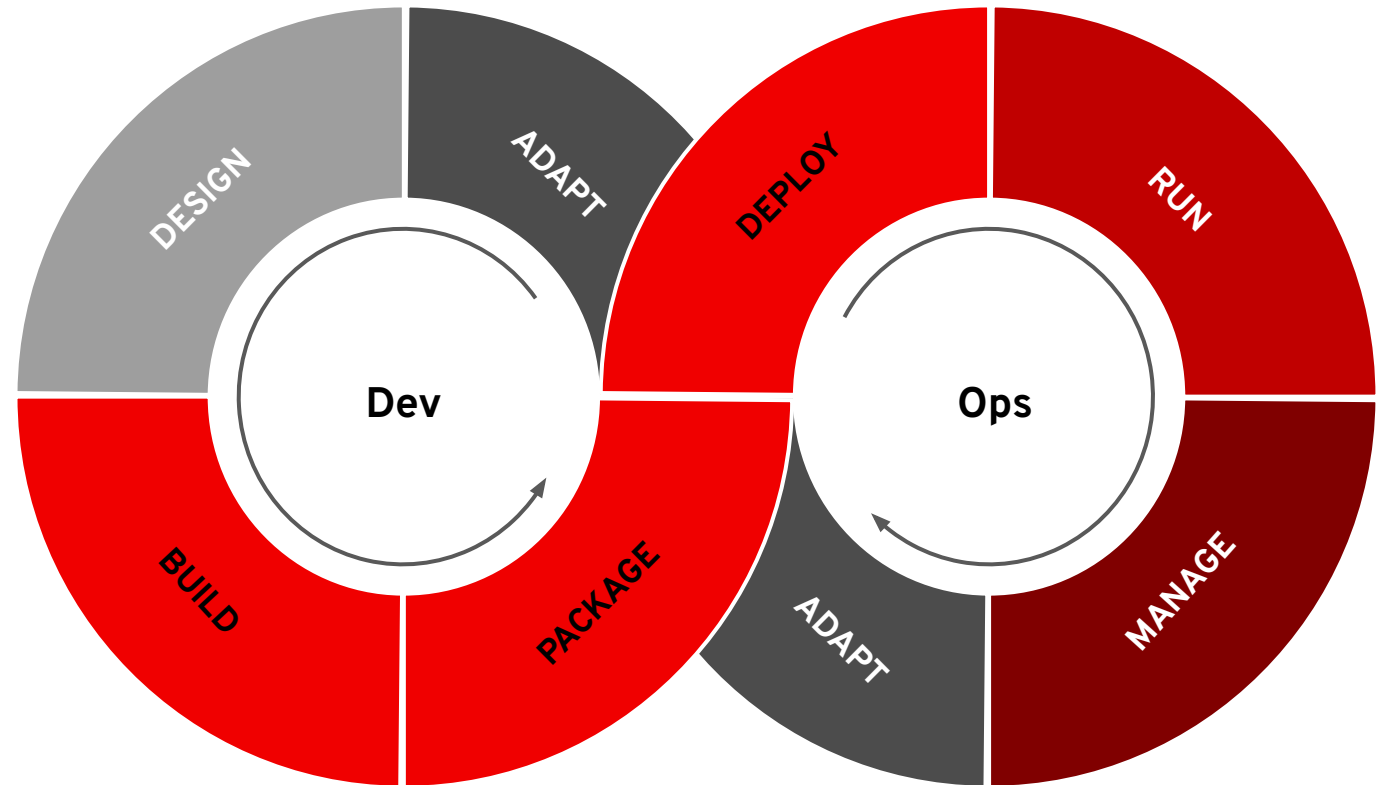
Protect the Platform



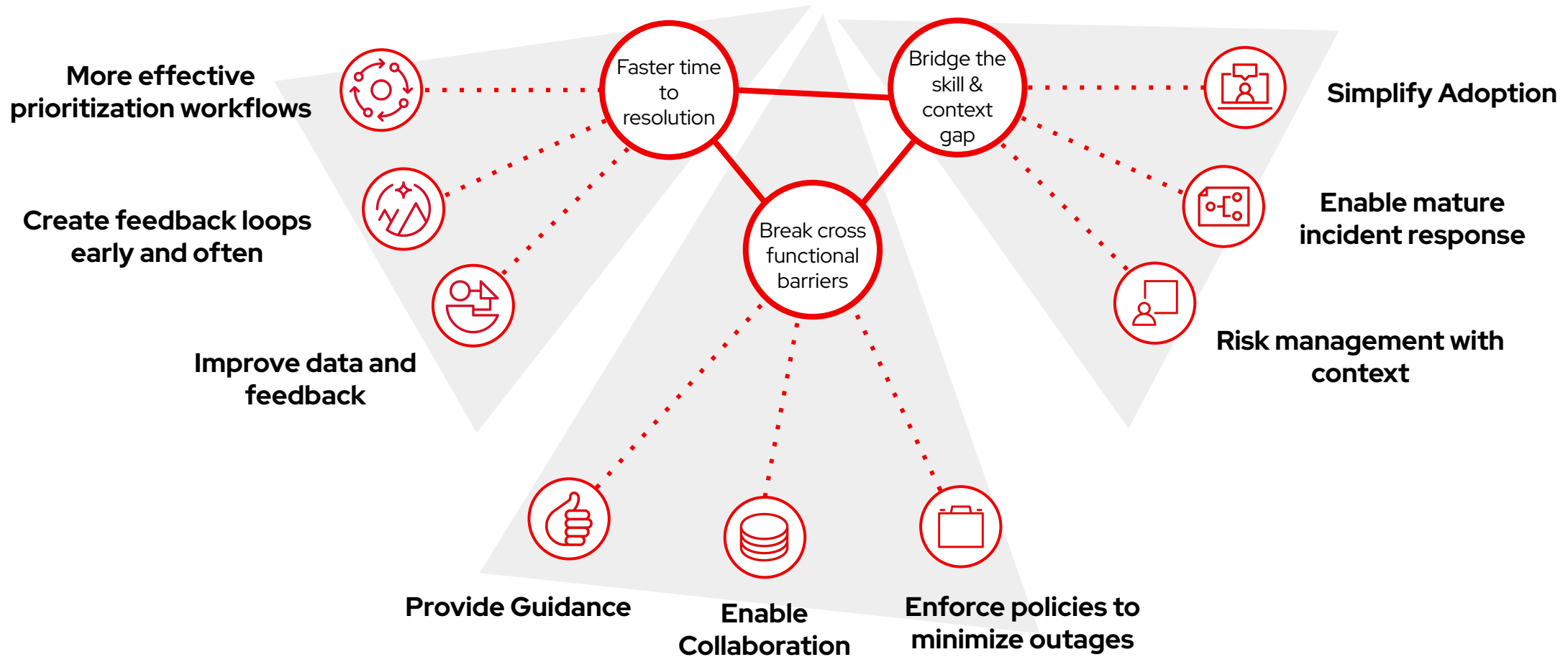
Detect & Respond to Runtime Threats



Control Application Security



Delivering Business Value Beyond Protection



Security programs are successful when they deliver these key attributes

Red Hat Advanced Cluster Security

Red Hat Advanced Cluster Security: Use Cases

Security across the entire application lifecycle



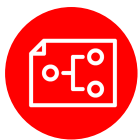
Vulnerability Management

Protect yourself against known vulnerabilities in images and running containers



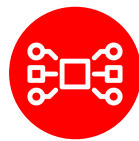
Configuration Management

Ensure your deployments are configured according to security best practices



Risk Profiling

Gain context to prioritize security issues throughout OpenShift and Kubernetes clusters



Network Segmentation

Apply and manage network isolation and access controls for each application



Compliance

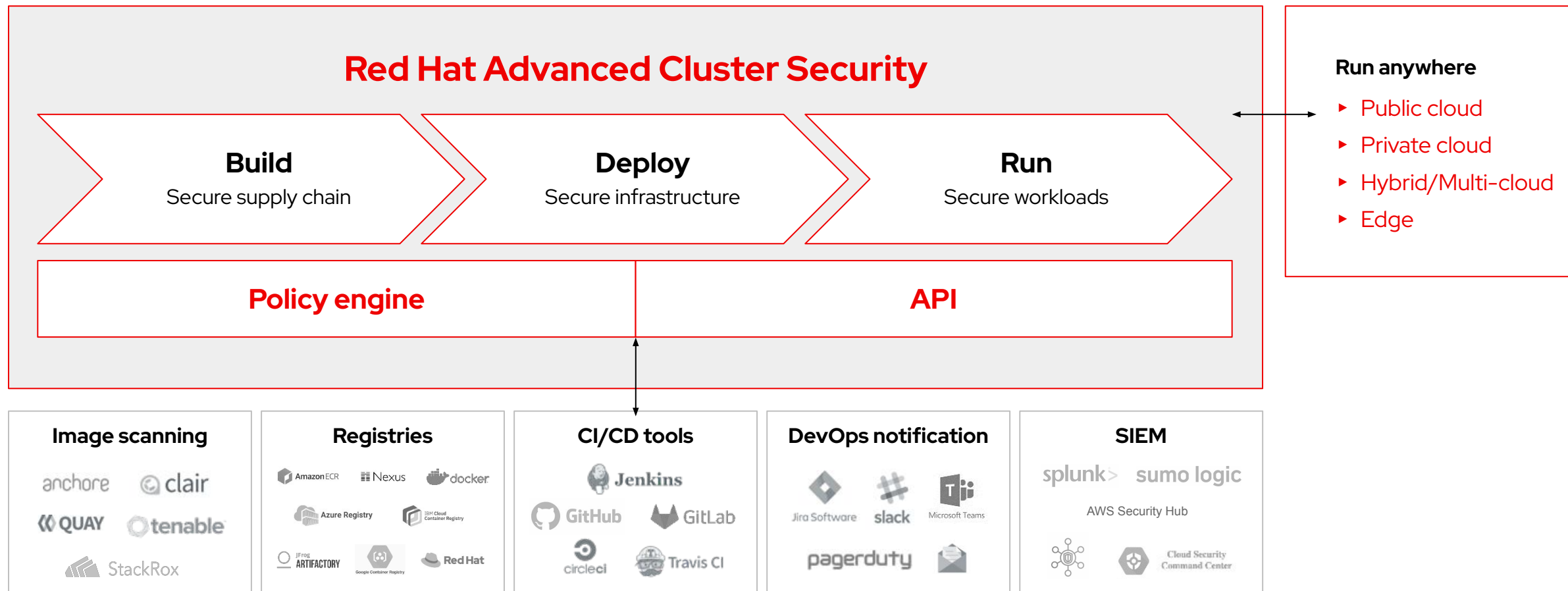
Meet contractual and regulatory requirements and easily audit against them



Detection and Response

Carry out incident response to address active threats in your environment

The First Kubernetes-Native Security Platform



Evolving Kubernetes Security

Accomplishments since joining the Red Hat team

Advanced Security Workflows

- 1 Updated the RHACS dashboard for greater high-level, configurable view of the vulnerabilities and security events in your clusters
- 2 Created a security alerting workflow for teams at scale using namespace annotations
- 3 Enabled self services security workflows with scoped access control
- 4 Align security policies with the MITRE ATT&CK Framework to allow for effective incident response prioritization

Best in Class Red Hat Support



Added host scanning support for RHEL 9 as of version 3.72. Will extend host scanning capabilities moving forward.



Reduced the administrative overhead of upgrade and install by creating an Operator for RHACS for application configuration



Enabled auditors and compliance teams to get accurate OpenShift data by integrating with the Compliance Operator



RHACS supported on Red Hat OpenShift Service on AWS, Azure Red Hat OpenShift, IBM Power/Z architectures

Red Hat Advanced Cluster Security Cloud Service

Get more value from your cloud investment with Red Hat ACS cloud services.

Faster time to value

Quickly deploy ACS in minutes that scale as needed across clouds and geographies, enabling a focus on securing your applications, not managing infrastructure

Reduce complexity

Fully-Managed ACS throughout the stack, 24x7 expert SRE support , with a consumption based pricing model

Hybrid Cloud Flexibility

Delivering a consistent ACS experience on cloud giving you the choice and ease of use to choose the offering that best fits your needs

Advanced Cluster Security Cloud Service

Start securing Kubernetes deployments in minutes

Deploy into any supported Kubernetes cluster

Managed by Red Hat

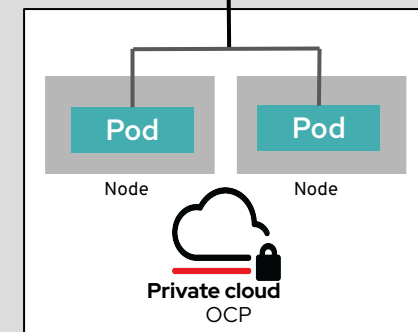
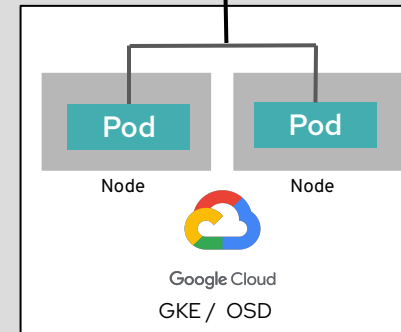
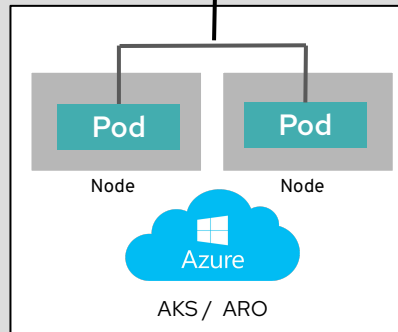
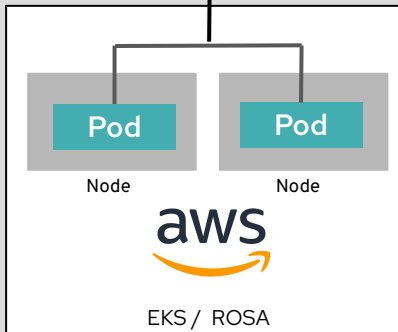
24 x 7 support

Flexible consumption models

Self Hosted
RHACS

Managed
ACS

Supported
by Red Hat



ACS Cloud Service: Service Preview

- ▶ Scan the QR code and sign in to gain access to the service preview offering
- ▶ Free offering for select customers
- ▶ Product feedback and environment testing
- ▶ Service preview starts in December 2022



What's Next?

Key Priorities



Security Innovation



Cloud Service



Portfolio Integration



Open Source

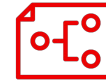
Vulnerability Management

Released



Scanner Consolidation

Unify RHACS scanner and Clair scanner offered with Red Hat Quay



Vulnerability Scanning Support for RHEL 9

Detect and report vulnerabilities for RHEL 9 UBI and RHEL 9 RPMs



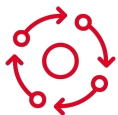
Enhanced Vulnerability Management

- Improve data quality and remediation guidance
- Vulnerability data representation by workloads, platform and nodes



Host vulnerability scanning

Extend ACS vulnerability scanning to host OS on the cluster nodes to provide a consolidated view of known vulnerabilities for your fleet of clusters



Streamlined Vulnerability Management workflows

Streamlined workflows that allow users to drill down from consolidated vulnerability data views to detailed views in just few clicks



Developer local image scanning

Enable developers to scan images before pushing to registry to shift further left

SecOps and Compliance



Continued Dashboard Enhancements

- Security metrics with trends
- Risk indicators



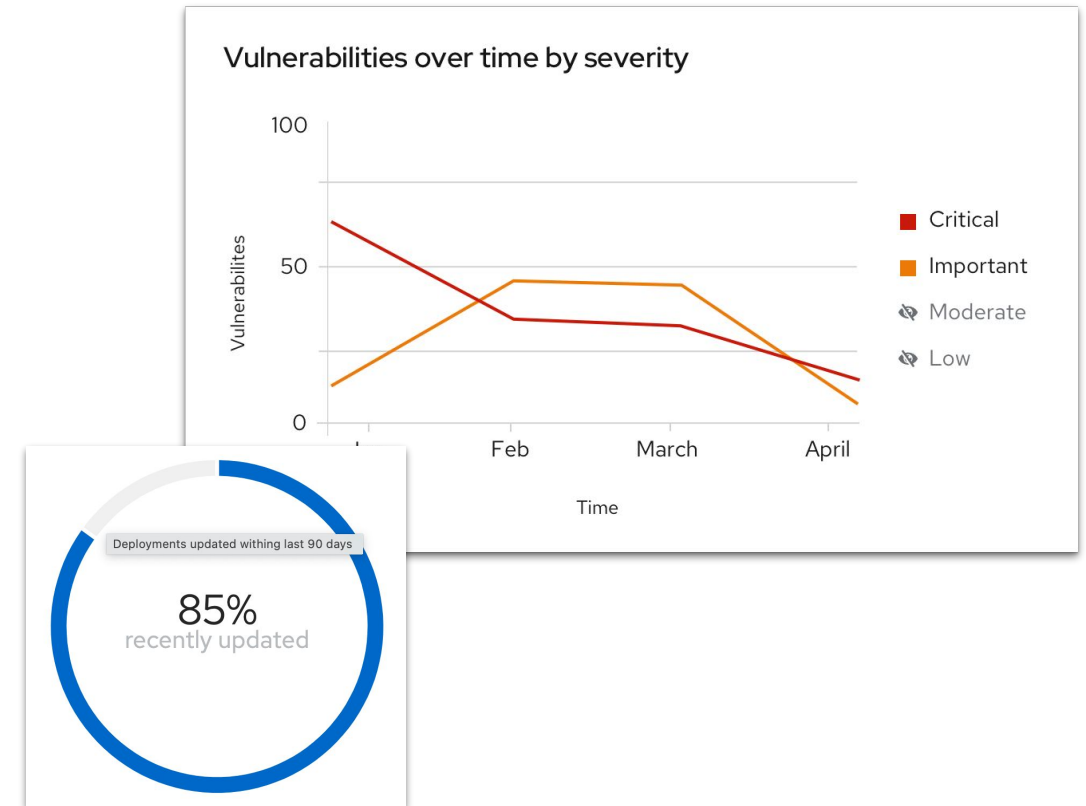
CIS EKS Benchmark

- Assess and remediate gaps in compliance for EKS clusters.



New Compliance Experience

- A seamless user experience combining the Compliance Operator with RHACS



Network Security



Shift Left Network Policy Management

- Help the DevOps Team
 - Automatically create Network policies
 - Check against cluster and namespace wide security policies
- Help Security Team
 - Enable scalable network protocols
 - Easily analyze and enforce network standards across the a Kubernetes environment



Network Insights

Network Policies Checklist

- ✓ Use a CNI plugin that supports NetworkPolicy API
- ✓ Create policies that select Pods using podSelector and/or the namespaceSelector
- ✓ Use a default policy to deny all ingress and egress traffic. Ensures unselected Pods are isolated to all namespaces except kube-system



National
Security
Agency



Cybersecurity
and Infrastructure
Security Agency

NSA CISA
Kubernetes Hardening Guide
March 2022

Community Projects

Open Source Projects



StackRox project

Stackrox.io is now the upstream project for RHACS

<https://www.stackrox.io/>



Clair

Contribute RH ACS scanner features to the open source Clair project

<https://github.com/quay/clair>



KubeLinter project

Extend KubeLinter coverage to Kubernetes operators

<https://github.com/stackrox/kube-linter>



Falco

Contribute RH ACS Collector features to the open source Falco libraries

<https://github.com/falcosecurity/libs>

SIGN UP ->

