

# ΔRMO

Kubernetes  
Security {Built  
for developers}.

```
1  armo GetKubescape(pathTo_success)
2      var Kubescape.downloaded
3      var installation
4  armo scan.cluster(framework.nsa)
5      If Kubernetes.scan == pass
6      cluster.deploy.secure
```

## Who am I?

- DevOps Engineer at Deloitte
- Open Source Contributor to Cloud Native Projects
- Co-organizer of Kong Bengaluru
- Technical Writer at Stakater
- 4x Microsoft Azure certified, 2x Google Cloud Certified
- Love being a part of technical communities
- Not a security expert



# ARMO

- Founded 2018
- Building Open-source Kubernetes Security products, made for developers
- Based in Jerusalem, 18 employees
- Backed by Pitango First

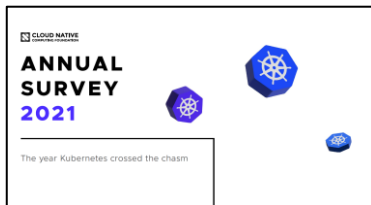


- Fastest growing K8s Security Open-Source tool on Github
- +6.1K stars, thousands of users
- A Multidimensional Kubernetes single pane of glass - Risk analysis & Compliance, RBAC Visualizer, Image scanning
- Over 10K k8s scanned and counting

< / Security Is Shifting Left

Developers Are The New Buyers

## Kubernetes is the new **cloud native operating system**

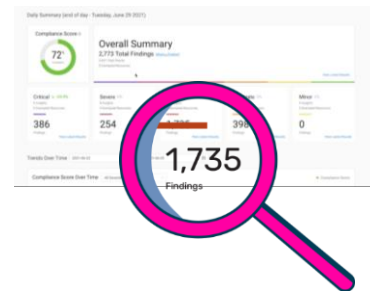


- **96%** of organizations are either using or evaluating Kubernetes
- **5.6 million** developers are using Kubernetes worldwide. That's **31%** of all backend developers
- Kubernetes is increasingly being used in production by companies leveraging managed services and packaged platforms

## Kubernetes is no longer “off the radar” for attackers



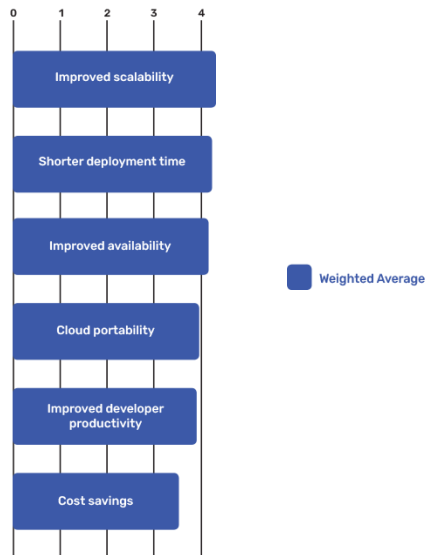
## Current security solutions fail to provide “devops” experience



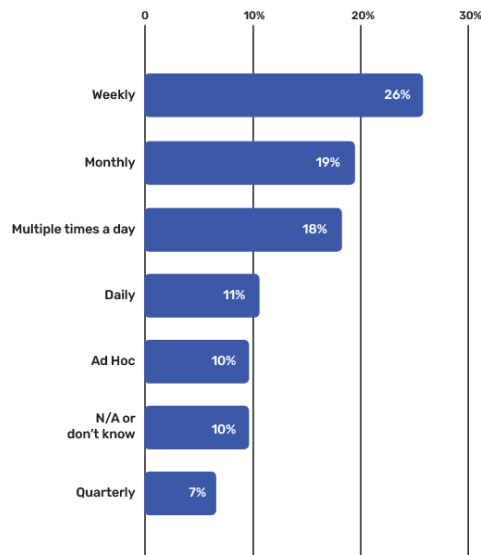
Too many alerts, too much complexity, **diminished security value**

# K8s Who, Why and How?

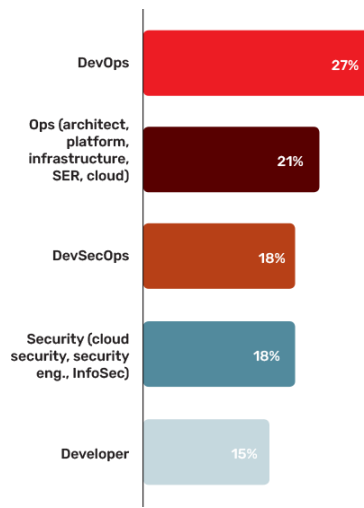
## Why are you using K8s?



## How often are you release cycles?



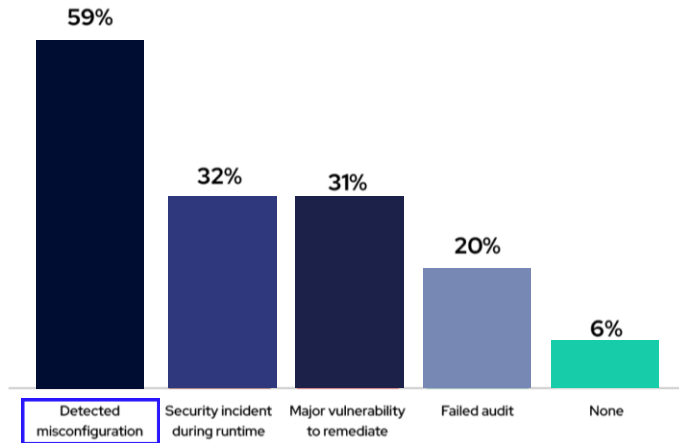
## What role at your organization is most responsible for container and Kubernetes security?



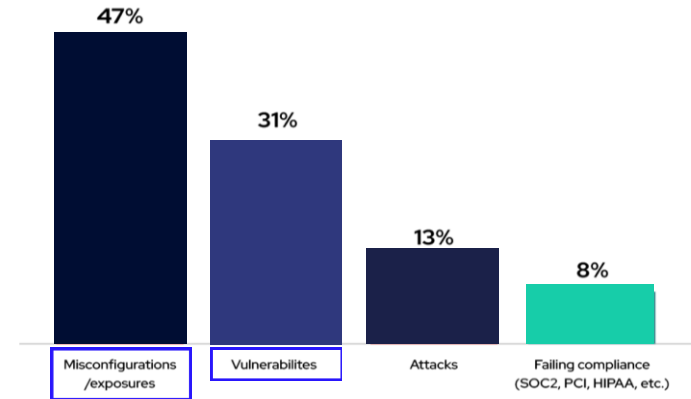
## Why do we need K8s security?

Through 2025, more than 99% of cloud breaches will have a root cause of customer misconfigurations or mistakes

In the past 12 months, **what security incidents or issues** related to containers and/or Kubernetes have you experienced?



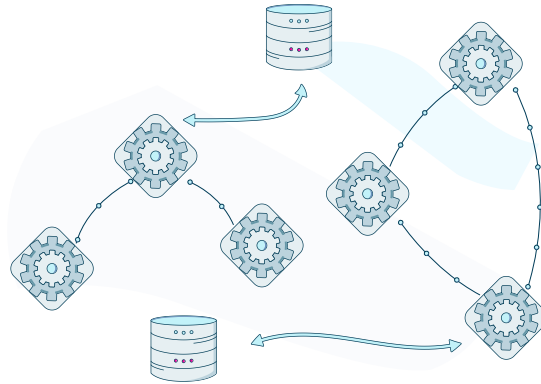
Of the following risks, **which one are you most worried about** for your container and Kubernetes environments?



# Protecting Kubernetes – two main paradigms to apply

## K8S POSTURE MANAGEMENT

Find known Vulnerabilities  
& Misconfigurations



## K8S RUN TIME PROTECTION

Anomaly Behavioral Analysis  
and Network Segmentation



# Protecting Kubernetes – two main paradigms to apply

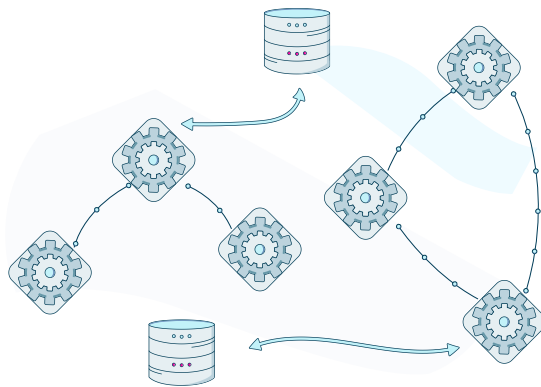
## K8S POSTURE MANAGEMENT

Find known Vulnerabilities  
& Misconfigurations

Focused on shrinking  
the attack surface,  
can be done early  
in the CI/CD



kubernetes



## K8S RUN TIME PROTECTION

Anomaly Behavioral Analysis  
and Network Segmentation

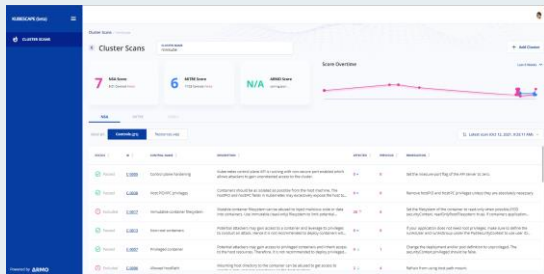
Focused on assuring  
detection/prevention  
of attacks when  
they happen



**Kubescape**  
by **ARMO**

# A Multidimensional Kubernetes single pane of glass

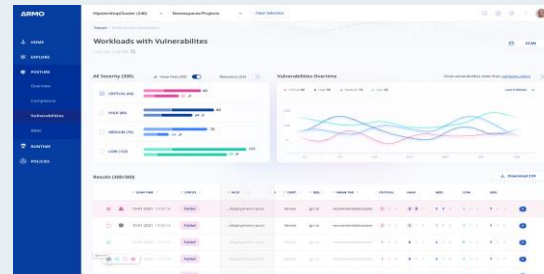
## Risk analysis & Compliance



## RBAC Visualizer



## Image scanning



Google Kubernetes Engine



Azure Kubernetes Service (AKS)



Amazon EKS



OPENSHIFT

# Building **Kubernetes Security** Single Pane of Glass

## Define and Enforce Best Practices

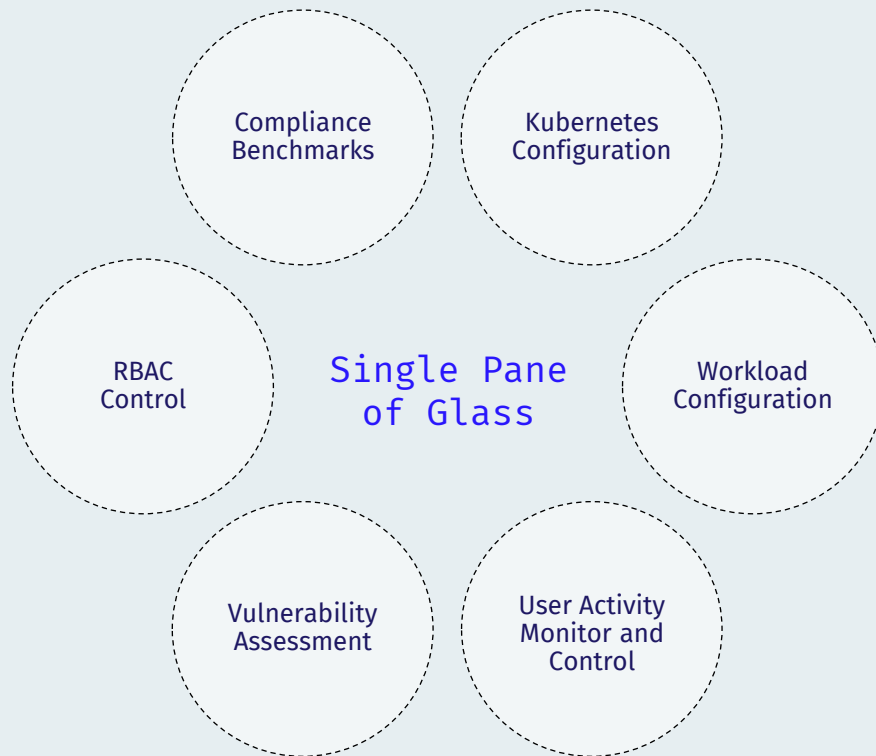
NSA, MITRE, K8s Best Practices, or create your own custom one

## Identify and Prevent Drifts

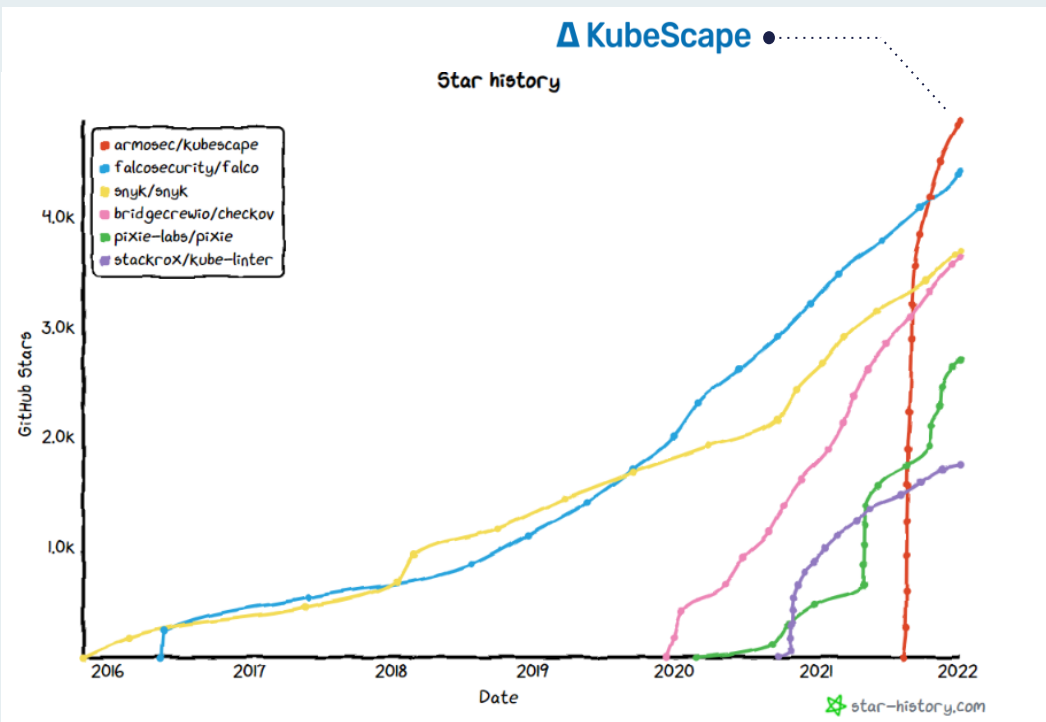
Continuously, from CI/CD to Production

## Continuous Env Tightening and attack surface reduction

Quick remediation, automatic recommendations, contextual insights



# Armo's Kubescape Is Becoming The Most Popular K8s Security Open-Source tool on Github



Fastest growing  
Kubernetes  
Security GitHub  
Project



Top GitHub  
trending list



Developers and  
DevOps from  
over 50 Fortune  
500 companies

# Happy Users, Providing Great Feedback, That Goes Viral

## Kubernetes hardening using Kubescape

Lachlan Evenson · 2 days ago · 4 min read



A friend of mine recommended that I should take a look at [Kubescape](#) as we were chatting about Kubernetes cluster hardening. Kubescape is an open



Marcel Horner · 3rd+  
Site Reliability Engineer at CI&T

1h · ...

That's great Jonathan! Kubescape is an awesome project and a valuable tool for anyone engaged on improving cluster security, especially for teams

LinkedIn



Ross Foard  
@FoardRoss

This is pure gold!!! NSA and CISA K8s hardening guidelines using OPA (Open Policy Agent)



Medium

j03b 11 hours ago [~]

This tool is great! Ran through all these checks and deployed them. Immutable fs & non-root is easier than I thought to deploy with k8s

HN Hacker News



Check out Kubescape - a new tool for Kubernetes hardening

#AKS #kuberr

80 views · 2 weeks ·

Pixel Robots

Check out Kubescape



kubescape - a

199 views · 3 weeks ·

Steve Konish

Kubescape is a new



265 views · 3 weeks ·

Saiyam Pathak

Kubescape is the first NSA ...

YouTube